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ABSTRACT

One of the basic principles of the Language Development Approach is that students must learn the language necessary to understand, talk, and write about all subject areas in order to succeed in school. This book contains information about teaching primary school science in the Northwest Territories with lessons that emphasize language. The goals of the unit are to (1) develop student language proficiency; (2) provide opportunities for students to use language in many different situations and for many different purposes; (3) develop student listening, speaking, reading, writing, and thinking skills including the science process skills; and (4) expand student knowledge of the science concepts related to air and air pressure. Following a section on resources (background information, resources included with this unit--illustrations, related English materials--magazines, lists of children's books about kites, balloons, airplanes, etc., teacher's resources, films, ets., and related aboriginal language materials), lesson plans for grades one, two, and three on four topics (properties of air/balloons, air exerts pressure, how air presssure helps/hinders, and effects of air on temperature) are presented. Activity ideas for science/social studies, mathematics, language arts, music/poems/stories, art, physical education/movement, and special activities are suggested. Each lesson plan contains the follwing segments--exercises or activities: science concepts, English vocabulary, English sentence patterns, English language concepts, special materials required, concept development/language exposure, language practice, and application. Poems, songs, and stories on this subject conclude the guide. The lessons are appropriate for students whose first language is English as well as for students who are learning English as a second language. (PR/CW)

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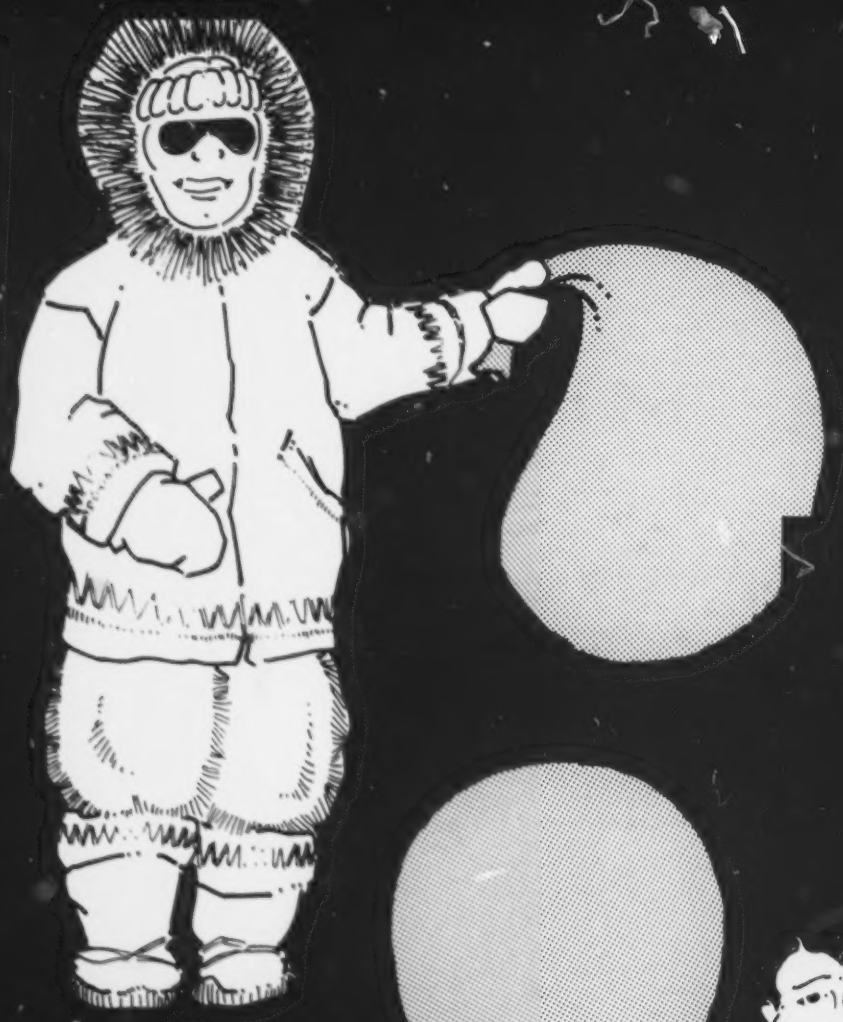

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Air & Air Pressure

A Language Development Unit for Science
Earth, Space and Time

Grades One, Two and Three

Editor:
Cathy McGregor, Program Specialist, English

Author:
Margy Gilmour

Science Advisor:
Don Kindt, Program Specialist, Math-Science

SCHOOL PROGRAMS
DEPARTMENT OF EDUCATION
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FOREWORD

Parents, educators, and students themselves all recognize the importance of language in the school curriculum. In order to have appropriate language programming, students need to have their experiences, skills, knowledge and, particularly, the language they bring to school identified and used as the basis for the program. Language programs should begin with and build upon these strengths. Where a child is dominant in a language other than English, he should be taught in that language. In many communities in the N.W.T., that means that the language of instruction should be Inuktitut or one of the Dene languages. Students in these communities need to gradually learn English as a second language. In instances where students speak a dialect of English upon school entry, the school's role is to respect and make use of the language the students bring. The school program should also help those students extend their English proficiency by learning the language used in varied communication situations and the language necessary for success with the academic curriculum. The aim of language instruction, where applicable and where possible, is to produce bilingual students.

Successful bilingual education requires good teaching in both languages. For many years northern educators have wrestled with the difficulties of teaching English with inappropriate commercial materials from the south. Teachers have been requesting assistance with how to most efficiently and effectively teach English as a second language/dialect. The Department of Education has determined that the Language Development Approach is the most suitable way to meet the needs of ESL/D students. The Department has developed these units for teachers to use in their classrooms. The Department therefore expects teachers to implement these units unless they can identify and justify to their Superintendent something more appropriate for their students.

Eric Colbourne

Eric Colbourne
Assistant Deputy Minister
Schools Branch

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Paula Stein	Brenda Petersen	Cathy (Baugh) Fair
Kathy Zozula	Bea Warren	Edna Elias
Jeanette Ireland	Val Green	Elizabeth Biscaye
Mark Stainer	Joan Weaver	DiAnn Watson
Judy Knapp	Jenny Turvey	JoAnne Deneron
Margaret Jones	Phyllis Kunder	Terri Thayer
Lynda Mann	Brenda Bellini	Jerry Geran
Janet LePrieur	Lois Omson	Jerry Pare
Carole Lane	Wendy Stephenson	Theresa Lachowski
Heather Nolsoe	Cathy Apawkok	Theresa Crane
Sister Mary Edward Recoskie	Sister Mary Diane Cahill	

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"Who Has Seen the Wind?" from Sing-Song by Christina G. Rossetti. Macmillan Publishing Company, 1924.

"Wind Song" from I Feel the Same Way by Lillian Moore. Atheneum Publishers.

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LANGUAGE DEVELOPMENT/SCIENCE UNITS

SCIENCE THEME	GRADE/YEAR		
	1	2	3
LIFE AND THE ENVIRONMENT*	- - - - - - - - - LIVING/NON-LIVING THINGS - - - - - - - - -		
	Arctic/Sub-Arctic Land Animals	Birds	Marine Mammals (Whales)
	- - - - - - - - - - - - - PLANTS - - - - - - - - - - - - -		
	- - - - - - - - - - - - POPULATIONS - - - - - - - - - - - -		
	Bears/ Polar Bears	Dinosaurs	Fish
MATTER AND ENERGY	Popcorn	Magnets	Water
	- - - - - - - ENERGY and ENERGY CONSERVATION - - - - - - -		
EARTH, SPACE AND TIME **	- - - - - - - - - - SUN, MOON AND SHADOWS - - - - - - - - -		
	- - - - - - - - - - **AIR AND AIR PRESSURE** - - - - - - - - - -		

* Other animals are covered under Social Studies topics: Fall, Winter and Spring.

Moose/Caribou	Seals
Beaver/Muskrat	Other fur-bearing animals
Rabbits	

** Weather will be covered in a Science/Social Studies/Math unit.

Topic A - Properties of Air (Grade One)

1. What are the properties of air?

   a) Air is a gas and is everywhere.
   b) Air takes up space.
   c) Air has weight.
   d) There is oxygen in air.

Topic B - Air Exerts Pressure (Grade Two)

1. What can air do?

   a) Air can move things.
   b) Air can hold things up.
   c) Air can slow down moving objects.

2. a) How does air pressure help people? (Grade Three)
   b) How does air pressure hinder people? (Grade Three)

Topic C - Effects of Temperature on Air (Grade Three)

1. What happens when you heat air?

   a) It expands.
   b) It rises.

2. What happens when you cool air?

   a) It contracts.
   b) It sinks.

UNIT OVERVIEW: GENERAL CONCEPTS

AIR AND AIR PRESSURE

HOW TO TEACH THE "AIR AND AIR PRESSURE" UNIT

How does the topic "Air and Air Pressure" relate to the science program?

The Elementary Science Program (1-3 and 4-6, 1986) contains several themes which include concepts related to air and air pressure. The following chart shows how the topics outlined on the General Concepts/Unit Overview sheet (see Table of Contents for page number) and the lessons in this unit relate to the concepts suggested in the program guide.

Primary Science Guide	Unit
2.2 **Properties of Matter**	
7. Gases have distinctive properties:	
- take up space	Lesson: Air Takes Up Space
- can move and cause objects to move	Lesson: Air Can Make Things Move Lesson: Go Wind Lesson: Warm Air Rises, Cool Air Sinks
3.2 **Energy, Heat and Temperature**	
4.a) Gases expand and contract when heat is added and removed.	Lesson: Air Expands and Contracts
3.3 **Changes in Matter**	
2. Matter occupies space.	Lesson: Air is Everywhere Lesson: Air Takes Up Space
3.5 **Air and Air Pressure**	
1. Air occupies space.	Lesson: Air Takes Up Space
2. Air exerts pressure. The larger the surface air presses on, the greater the total force.	Lesson: Air Can Hold Things Up Lesson: Air Can Slow Things Down Lesson: Air Pressure Can Help or Hinder Us
3. Air contracts when cooled and expands when warmed.	Lesson: Air Expands and Contracts
4. Warm air rises and cold air sinks.	Lesson: Warm Air Rises, Cool Air Sinks

Using the topic "Air and Air Pressure" as an organizing theme, this unit translates the concepts from the Science and Social Studies program guides into a set of teaching lessons.

What part of my program is this unit?

One of the basic principles of the Language Development Approach is that students must learn the language necessary to understand, talk and write about all subject areas in order to succeed in school. Most of the material in the "Air and Air Pressure" unit is related primarily to Science; it is therefore part of your Science program. It also contains lessons which emphasize language and concepts from other subject areas. At the beginning of each lesson is a statement which indicates which subject area that lesson emphasizes. You can teach the Literature lessons during Language Arts periods or during Science, whichever you prefer.

What are the goals of this unit?

The goals of this unit include:

- developing students' language proficiency. The purpose is to increase their storehouse of language items and meanings (vocabulary) and to build their intuitive knowledge of structures (sentence patterns). The intent is not to have students study how the language works or to analyze it.
- providing opportunities for students to use language in many different situations and for many different purposes.
- developing students' listening, speaking, reading, writing, and thinking skills. The thinking skills developed include the scientific process skills described in the science program guide.
- expanding students' knowledge of the science concepts related to the "Air and Air Pressure" topic.

What grade level is this unit?

Schools throughout the N.W.T. have different ways of organizing students into classes. There are classrooms which consist of only one grade, while others combine two or even three grades. Small schools sometimes have to put primary and

intermediate students together. Regardless of the grade level(s), students in each class will have a variety of levels of proficiency in English.

It is difficult to present a unit which teachers can use easily in all these different situations. The chart which outlines Science topics for grades one to three lists this unit under each grade. You will find that the unit contains a variety of language items, sentence patterns and activity ideas. Some of the concepts and some of the language activities in the lessons are more suitable for younger/older students. This was done to accommodate the range of abilities which exist even in classes which are supposed to be one grade level and also for those teachers who have multi-grade classrooms and want to teach the same unit to the whole class.

What else do I need to know before I teach this unit?

It is important to understand the Language Development Approach which forms the basis of this unit and the Language Development Framework which forms the structure of each lesson. Please read the explanation of them which follows this section. It introduces the parts of each lesson and explains their purpose. Once you have read the description several times and taught a few lessons you probably will not have to read it for every unit.

How long should I spend on this unit?

The length of time you spend on each lesson and on the unit as a whole will depend in part upon what your students already know about the concept/topic and how interested they are in it. As with any unit you teach, however, the success of this unit will depend largely upon your interest in and enthusiasm about the topic. If you make the lessons stimulating to students, they will want to spend more time studying the topic.

In general, it is more important to cover a few concepts well and ensure that students incorporate the language items for those concepts into their language repertoires than to cover everything in the unit. If students begin to lose interest in the topic, wind up what you are doing and start a new unit.

Which lessons do I teach?

This unit includes a number of lessons. As the person who knows your students and their needs best, you must decide which lessons are appropriate for your students and which are not. You may decide not to teach certain lessons because:

- students already know the concept and the language covered
- students are not interested in that aspect of the topic
- the language is too difficult or is not appropriate
- the concepts are too difficult or are not appropriate

The initial assessment activities will help you identify which concepts and vocabulary students already know and therefore which lessons you can skip and which are more appropriate for you to teach. You might also want to check the students' cumulative files and/or discuss with other teachers which topics students have already covered. It is important to keep a record of which lessons you teach so that other teachers will not repeat that material in future years.

In what order should I teach the lessons?

You can teach the lessons in the order in which they appear in the unit or you can teach them in any order you think is appropriate for your students. Generally, the Science lesson for a topic should precede (or be taught at the same time as) the Language Arts lesson for that topic. The Language Arts lesson uses poetry or literature to reinforce the concepts taught during Science.

How do I adjust these lessons to meet the particular needs of my students?

The lessons in this unit are SAMPLE lessons. They may be used in classrooms where English is the first language of students (and they are very proficient), where students speak a dialect of English, or where English is a second language for students who come to school proficient in an aboriginal language. Because of this diversity of linguistic situations it is difficult to design lessons which are equally appropriate in every classroom. These lessons provide an example of the kind of language and activities which are appropriate to teach the concepts related to the topic. You may be able to teach them exactly as they appear here. If you feel some aspect of a lesson is not appropriate for your students however,

feel free to adapt it to meet their needs. You may wish to use some of the activity ideas to make up lessons of your own and use them instead of the ones included. Some of the most common ways in which you might need to adjust the lessons include changing the:

a) amount or type of vocabulary and/or sentence patterns in a lesson. During the initial assessment activity you may find that students have/don't have particular vocabulary items or sentence patterns. You may need to make the language in each lesson simpler or more difficult, depending upon your students' proficiency. You may want to introduce fewer or more vocabulary items or sentence patterns. Students who are more proficient need to concentrate on vocabulary; you may want to omit all sentence patterns for them.

b) number of listening and speaking activities. Students who speak little or no English or who are not familiar with a topic require extensive aural/oral practice. This is particularly true of primary ESL students. You may want to delete reading and writing activities altogether for such students and substitute more listening and speaking activities. Students who are having difficulty speaking need more listening practice so you may want to increase the emphasis on listening. Students who are more proficient do not need as much listening and speaking practice; they can do more reading and writing activities.

c) kinds of activities suggested for listening, speaking, reading, and writing. Your students' ages, interests, abilities, needs, and language proficiency influence the kinds of activities you choose for them. Students with limited proficiency require more controlled Language Practice activities. Students who are more proficient can handle more open-ended activities. Your preferred teaching style and the materials and equipment available to you also affect your planning. You may want to change some of the activities to make them more suitable for your students. You may have to change others because you do not have the necessary resources.

d) sequence of activities suggested. Each lesson contains all three phases of the Language Development Framework: Concept Development/Language Exposure, Language Practice, and Application. It is important to include all three

phases in your teaching. However, you may want to alter the sequence in which you do the activities within each phase. For example, in the Language Practice phase listening and speaking activities always precede reading and writing activities. Usually it is important to develop aural/oral skills before introducing/developing literacy skills. However, if you have older students who are more proficient in reading and writing you may have to combine those activities with listening and speaking to keep students interested and involved. This is not as likely for primary students; they require simple physical actions to help focus their attention and energy during listening and speaking activities.

e) content used to teach the concept in each lesson. These units have been developed for use throughout the N.W.T. in various cultural and linguistic situations. It is difficult, therefore, to be as culturally specific in the lessons as desirable. As you plan your lessons, you must be as sensitive as possible to the cultural values, experiences, and lifestyles of your students. Please make the lessons as relevant to your community and your students as possible. If you think anything might be offensive to parents or students in your community please omit it or substitute more appropriate content. If in doubt, ask! LEA members, classroom assistants, and parents can provide suitable alternatives. If you are teaching any of the lessons in an aboriginal language, you probably will need to change much of the specific content in those lessons.

f) language in which you teach the lesson. If you teach in a classroom in which an aboriginal language is the language of instruction and English is taught as a second language you will want to teach some of the lessons in each language. For students who are just learning to speak English, the language in some of the lessons is too difficult. Teach those lessons in the aboriginal language. In such situations, consider teaching the lessons as follows:

ABORIGINAL LANGUAGE (during Science)	ENGLISH (during ESL)
Air is Everywhere	The Hungry Balloon
Air Takes Up Space	Go Wind
Air Has Weight	
There is Oxygen in Air	
Air Can Make Things Move	
Air Can Hold Things Up	
Air Can Slow Things Down	
Air Pressure Can Help or Hinder Us	
Air Expands and Contracts	
Warm Air Rises, Cool Air Sinks	

If you teach in a classroom in which English is the language of instruction, you will teach all of the lessons in English. In such situations, you might teach some lessons during your Science periods and others during your Language Arts periods. If your students are not very proficient in English you may want to omit some lessons altogether.

How do I group students?

These lessons have been designed so that you can teach one lesson to the whole class. You can do Concept Development activities with everyone in most instances. Then you can group students for Language Practice activities according to their needs and abilities. Students who require listening and speaking practice can work with the teacher, a classroom assistant, a tape recorder, or a language master while other students do related reading and writing activities. In this way you can work with the whole class on the same lesson, but students can perform at their own individual skill levels.

Sometimes you may want to group students and teach each group a different lesson. You could organize these groups in two ways:

1) include students with different levels of proficiency in each group. The students who are more proficient serve as models for less proficient students. Teach each group a lesson from a different topic and have students share their work with each other.

2) include students with similar proficiency levels in each group. Teach each group a lesson using material at its proficiency level.

What kind of preparation do I need to do before teaching a lesson?

First of all, you should read over the lesson so that you are familiar with it and with the materials you require to teach the lesson.

Secondly, you should make sure you have all your materials ready, even if it means delaying the introduction of a unit or lesson for several days. This includes whatever resources you require for the Concept Development activities, as well as Language Practice materials: vocabulary cards, pictures, sentence strips, etc.

Initially it may seem as if there is a lot of preparation for each lesson, but one lesson may take several days to teach and most lessons use the same materials over and over again in different ways. Students in small groups use many of the materials from Concept Development activities during Language Practice. If you work in a school where more than one teacher is using the units, perhaps you can share the preparation work required. Older students often enjoy making things like sentence strips after school as well. Once you have made the materials for one lesson, be sure to save them for another teacher or another year! Plastic envelopes have been provided to help you keep all the materials for one unit together.

Many illustrations that you need for the lessons have been included. **Please note however, that the illustrations in the accompanying envelope are Masters.** Please use them only to make your own copies. (You may have to adjust the size of some to make stencils or other resource materials.) When you are finished with the unit, please sequence the Masters and return them to the envelope so that other teachers will be able to find all the materials easily.

How do I schedule a lesson on my timetable?

Because the lessons emphasize language related to different subject areas, you may want to teach them during various subject periods. This means you may be working on two or three lessons at the same time, each during a different subject. Since the lessons all focus on the same theme, language and concepts emphasized during one period will reinforce those learned during another. It also means that you

would be combining the normal times allocated each week for Science and Social Studies to teach this Science unit for three weeks or a month. You would then switch to a Social Studies unit for several weeks using both time periods.

As you plan, keep in mind that one lesson is not necessarily equivalent to one day's work. You will require several days to cover most lessons. You need this amount of time to make certain students internalize new concepts and language items. The chart below shows how you might teach the lesson "Air Takes Up Space" during your Science period over a week.

Note that the Concept Development activities are spread over several days. This helps reinforce both concepts and language and gives students who miss one day's lesson other opportunities to be exposed to the material. Note also that listening and speaking activities precede reading and writing so that students are very familiar with the language orally/aurally before they work with it in print.

Key

(L) = Listening activity
(S) = Speaking activity
(R) = Reading activity
(W) = Writing activity

LESSON: AIR TAKES UP SPACE

	Monday	Tuesday	Wednesday	Thursday	Friday
Concept Development	#1 #2	#3 #7	 #7		
Language Practice		#1 L #2 L/S #5a S/R	#3 L/S #4 L/S #5b R	#6 R/W	#7 W
Application		#1		#2	#3

* Note: Activities that were not used in Concept Development (#4, #5, #6) could be used as Application activities.

How do I evaluate student progress in this unit?

Initial Assessment

The initial assessment activities which you do with the students before any of the lessons will help you determine which concepts and language students already know and which they need to learn.

Ongoing Assessment

It is important to continue assessing students' success in mastering language items, skills and concepts throughout the unit. Each phase of the framework provides opportunities for assessment. During the Concept Development/Language Exposure activities you can informally assess students' understanding of new concepts through observation. Watch to see which students have difficulty matching new language items with the appropriate objects or meanings. It is important to ensure that all students understand new vocabulary and sentence patterns before starting Language Practice activities.

The nature of the Language Practice activities allows you to assess individual student performance of listening, speaking, reading, and writing skills. You can decide which activity to do next based on student performance in the previous activity. Those students who have difficulty with aural/oral activities require extensive practice before doing reading and writing.

The Application activities have been designed to give you an opportunity to determine how much of the language for that lesson students have learned. You can also determine whether students understand the language and concepts.

In addition to observing students during lesson activities, sometime during the course of the unit each student should have a personal conference with you to review work from various lessons. The one-to-one nature of this meeting allows you to determine more effectively:

1. specific weaknesses and strengths in listening, speaking, reading, writing skills,
2. comprehension of and proficiency using new language items,
3. topics and areas within a topic of particular interest to the student.

4. individual progress with the development of scientific process skills (thinking skills),
5. comprehension of science concepts included in the unit.

For the student this meeting serves as an important opportunity to articulate thoughts and feelings about the topic, share work with an interested adult, and identify future projects and directions. You can use the conference to take an in-depth look at one piece of independent reading/writing, to teach skill lessons needed to support and encourage student efforts, and to determine appropriate activities for future lessons.

Final Assessment

The culminating activities provide further informal assessment opportunities. During these activities students use all the concepts, skills and language they have learned throughout the unit. In addition, you may want to use your own assessment techniques or instruments to determine what students have learned. There are examples of simple evaluation activities at the end of the unit.

What kind of records should I keep for this unit?

You will want to keep records for yourself of individual student's progress and mastery of skills, concepts and language. These records can be a combination of anecdotal notes based on observations, check lists, formal or informal tests, taped samples of students' speech and reading, and samples of written work.

Students should also be responsible for keeping records of what they have accomplished. They can keep lists (poems they have learned, stories they have read, books they have written), journals, and their own samples of speech, reading and writing.

Finally, it is also important to keep a list for the next teacher of which topics you have taught and which concepts have been covered in those topics. Hopefully this will prevent those groans of "We did that last year," or even worse "We've done that every year since grade one!"

You will find more detailed information on evaluation and record keeping forms in the booklet Evaluation Guidelines for the Language Development/Science Units.

INTRODUCTION TO THE LANGUAGE DEVELOPMENT APPROACH

This unit consists of lessons which illustrate how to implement the Language Development Approach in the classroom. In order to use these lessons most effectively, it is important to be familiar with and understand:

a) the principles which form the basis of the approach, and
b) the methodological framework which provides the structure for the lessons and applies the principles to teaching practice.

The following is a brief explanation of the principles and the framework. For a more in-depth discussion of both, refer to the appropriate sections in the Language Development ESL/ESD guide.

PRINCIPLES

The Language Development Approach draws on elements of many approaches to teaching second languages and English language arts and integrates these to form a broad set of principles regarding language teaching. These principles include:

1. **Students need to have their experiences, skills, knowledge, and particularly, the language they bring to school identified and used as the basis for the school language program.** The program should begin with and build on these strengths. Where children are dominant in a language other than English, they should be taught in that language. In many communities in the N.W.T., that means that the language of instruction should be Inuktitut or one of the Dene languages. Such students should gradually learn English as a second language. In instances where students speak a dialect of English upon school entry, the school's role is to respect and make use of the language the students bring, and help them learn the English used in other communication situations and which is necessary for success with the curriculum. The aim of language instruction, where applicable, and where possible, is to create bilingual students.

2. **Students need to learn to articulate for themselves and to communicate their thoughts, feelings, needs, opinions, and intentions for a variety of purposes in many different communication contexts. They need to be able to understand, learn from and respond to the communication of others.** This involves being able to:

a) express and inquire about personal needs, desires, feelings;
b) socialize;
c) direct;
*d) express and find out intellectual attitudes;
*e) impart and seek factual information on past and present experiences;
*f) reason logically;
*g) predict;
*h) project;
*i) imagine.

* Success in school depends largely upon the students' abilities to use language in these ways.

3. **ESL/ESD students need to spend more time learning to speak English than they do learning about English.** Until students have an extensive language repertoire, and can use language for a variety of purposes and in many different situations, they are not ready to analyze language. When students have developed an intuitive grasp of how English works, they can begin to study language concepts and how to apply them.

4. **Students need to learn language, but they also use language to learn.** Therefore, language should be taught across the curriculum. Whether students are learning a subject in their first language or in a second language, the development of each student's language skills is essential to achievement in the subject.

5. **Students need to learn language that is meaningful.** It is easier to accomplish this when teaching language in a context. Therefore, all teachers, in all subject areas, must attend to concept development. Without adequate concept development, the language students learn is either vague or devoid of meaning.

6. **Students need to learn to develop their thinking skills and to engage in more abstract levels of thought as they mature.** They must learn the language that allows them to express their thinking about concepts. Initially, they need to

learn concrete vocabulary and functional sentence patterns as they learn to recall, match, sequence, classify, etc., during activities. Eventually they need to learn more abstract terms and more complex sentence patterns as they grow in their ability to think more abstractly: generalizing, analyzing, imagining, predicting, and evaluating.

7. **Students need to participate in language activities that integrate the language strands of listening, speaking, reading, and writing.** When these strands are taught in isolation from each other in the guise of subjects such as spelling, phonics, grammar, reading, etc., student learning becomes fragmented. Students have difficulty understanding the relationships among listening, speaking, reading, and writing and lose the benefit of one or more strands preparing for and/or reinforcing growth in another e.g., discussion and brainstorming which involve listening and speaking prepare students for writing. First and second language programs should therefore integrate listening, speaking, reading, and writing skills. Specific skills taught will vary with the proficiency level of the students. In the initial stages reading and writing activities should use only language which students have internalized already through aural/oral work. Strong oral proficiency is a prerequisite to learning to read.

   a) Successful readers rely on three language cue systems:

      - grapho-phonemic
      - semantic-associational
      - syntactic

      The ability to use the latter two systems is a function of oral language proficiency. The greater the oral proficiency or degree of internalized language of the students in either their first or second language, the more able they are to use the latter two systems. Reading instruction should not emphasize the use of the grapho-phonemic system to the exclusion of the semantic associational and syntactic systems.

   b) Successful writers also rely on three cue systems. They must possess a meaning base on which to draw, a storehouse of vocabulary representing the meaning base (semantic-associational), and an intuitive sense of how the English linguistic system works (syntactic). Mechanical skills

(grapho-phonemic) are just the tools which enable students to communicate knowledge more effectively.

8. **Students need to learn "real" language and how to use it in the natural situations in which it is required.** The vocabulary items and sentence patterns used in lessons should be as similar as possible to the everyday language people actually use. Students require opportunities to practice the language by interacting with others. They will not learn to use language effectively solely through individual paper and pencil exercises.

Program content, classroom organization and teaching techniques used to develop concepts and language and skills should:

a) reflect all of the above, and
b) vary according to:

- the language proficiency of the students in the first and second language,
- cultural background (experiences, interests, and cognitive abilities),
- age/grade levels,
- type of topic,
- learning style of students,
- materials and equipment available,
- teaching style of teacher.

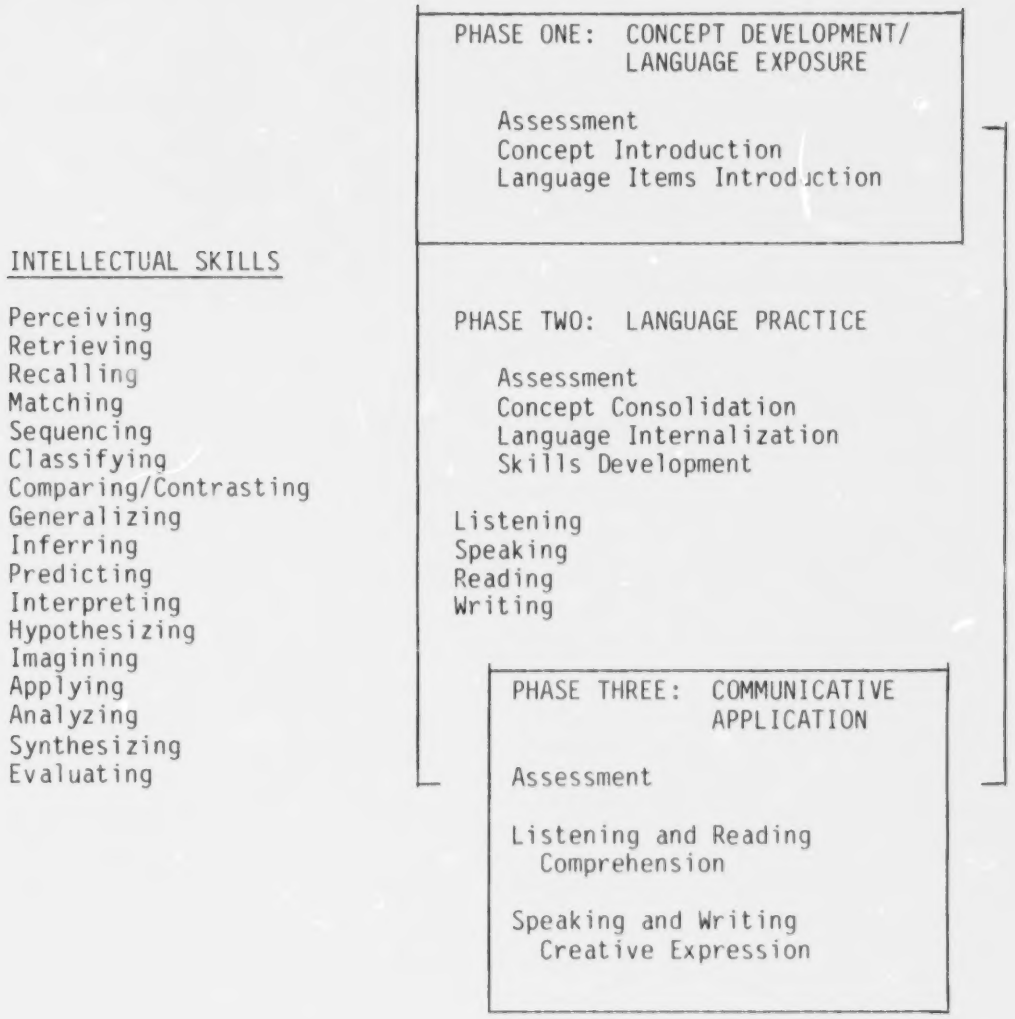
FRAMEWORK

The Language Development Approach uses the following framework to structure lessons involving language learning and conceptual development for all subject areas or for any topics of personal or cultural relevance and interest. The framework consists of three phases:

Phase One: Concept Development/Language Exposure
Phase Two: Language Practice
Phase Three: Communicative Application

LANGUAGE DEVELOPMENT FRAMEWORK

(Based on the work of Jim MacDiarmid
Adapted by B. Pugh and C. McGregor)



Phase One: Concept Development/Language Exposure

At the beginning of this phase, it is important to assess what conceptual and linguistic knowledge students already possess for a topic. This assessment establishes the appropriate starting point for instruction and helps determine which concepts, experiences, and language items to emphasize.

During this phase, students participate in meaningful activities or experiences through which they learn new concepts related to the topic of study. As much as possible, these activities should involve direct, firsthand, active learning with concrete materials. Where necessary, e.g., in a unit on space, indirect or analogous experiences (films, filmstrips) allow students to move beyond the confines of the immediate classroom to explore concepts associated with other times and places. These activities and experiences help students build bridges between what they already know and new concepts.

While they carry out the concept development activities, students hear and use the new language items that express the concepts. They learn to associate new vocabulary with the relevant objects or actions and to express the relationships among concepts with appropriate sentence patterns. It is essential that students learn the meaning of all new language items during this part of the lesson.

You may choose to use the students' first language during this phase when students have little or no English. You can conduct the assessment tasks in their first language to determine the extent of their conceptual knowledge. If the concepts are familiar, concentrate in ESL classes on teaching the related English language items. If the concepts are new, teach them to students in their first language and then introduce English language items. In classrooms where English is the language of instruction, have the Classroom Assistant explain difficult concepts in the students' first language to be sure they understand them.

Phase Two: Language Practice

In Phase Two, students use the new language items introduced in Phase One in a variety of activities that develop listening, speaking, reading, and writing skills. Through intensive practice of items in a variety of ways, students come to "own" the new language, i.e., commit it to memory so that it becomes part of

their permanent storehouse of language items. These activities also continue to strengthen the bond developed in Phase One between the new concepts and the language items that represent those concepts. While the whole class may participate in most of the Phase One activities, it is important to group students for language practice according to their language skills and needs. For students who are not proficient in English, use only language items that they are comfortable with aurally/orally in reading and writing activities.

Phase Three: Communicative Application

The final phase of the lesson sequence provides opportunities for students to use their acquired knowledge and language to communicate in a variety of situations. Students show they have understood the new concepts and can use the new language items as they interact with others. These activities involve students in listening, speaking, reading, and writing to solve problems, bridge an information gap, share information, complete a task, develop an arts and crafts project, share a finished product and explore related concepts and language. While carrying out these activities, the teacher can work individually with students to assess the extent to which they have mastered the concepts and language from the lesson.

In addition to the communicative application activities for each lesson, there are culminating activities at the end of each unit which provide opportunities for students to use all the concepts and language they have learned throughout the unit. During these activities the teacher can meet with students to review their work and what they have learned during the unit.

Intellectual Skills

An essential component of the framework is the development of intellectual skills. Learning new concepts and language involves thinking skills. On the other hand, the ability to think abstractly involves conceptual and linguistic knowledge.

Students who lack the prerequisite basic experiential and linguistic knowledge for a topic cannot engage in activities that require them to apply or solve problems

using that knowledge. In moving towards abstract levels of thinking students must:

- acquire simple and concrete concepts and the corresponding labels,
- see patterns and relationships among concepts and form progressively larger and more inclusive conceptual networks in the form of principles and generalizations,
- apply the principles and generalizations to new situations, and
- analyze, synthesize, and evaluate old and new knowledge to solve problems.

In the Concept Development/Language Exposure phase, assessment activities establish whether or not students have basic building block concepts and language to engage in more abstract thinking about a topic. Subsequent activities fill gaps and/or extend the students' background. The structured nature of Language Practice activities demands less high level intellectual activity. Answers are more convergent in nature; the information readily provided or available. However, Communicative Application activities require divergent thinking. Students draw on what they already have learned during the previous two phases to bridge an information gap or solve a problem.

USING THE FRAMEWORK

The Language Development Framework:

- helps students acquire a conceptual background about a topic
- helps students acquire language to express their knowledge about that topic
- provides opportunities for students to use their knowledge and related language in a variety of situations and
- provides opportunities for students to engage in higher levels of thinking.

The framework forms the basis for the following lessons. Keep in mind that the techniques and activities you use with students depend upon many factors:

- cultural background of students
- learning style of students
- age level of students
- proficiency in English
- type of topic
- materials and equipment available, and
- preferred teaching style of teacher.

RESOURCES: BACKGROUND INFORMATION ON AIR AND AIR PRESSURE

RESOURCES: INCLUDED WITH THIS UNIT

Lesson: Air Takes Up Space

- illustrations of inflated/deflated objects
- sample worksheet

Lesson: Air Has Weight

- sample worksheet

Lesson: There is Oxygen in Air

- illustrations of firefighter, skindiver, astronaut

Lesson: The Hungry Balloon

- illustrations to accompany the story

Lesson: Air Can Make Things Move

- illustrations of things that move in the wind

Lesson: Go Wind

- shape book

RESOURCES: RELATED ENGLISH MATERIALS

Magazines

Refer to back issues of children's magazines such as Owl, Chickadee, Ranger Rick, My Big Backyard, etc. for articles about balloons, kites, airplanes, gliders and so on.

Children's Books

How to Make and Fly Paper Airplanes
Ralph S. Barnaby
Scholastic, 1969

Kites
Wyatt Brummitt
Western, 1971

Kites and Gliders (Starters Science)
Albert James
Macdonald, 1973

Kites
Larry Kettlekamp
Morrow, 1959

Making Paper Airplanes
Making Kites
(How to Have Fun series)
Creative Educational, 1974

Paper Airplane Book
Seymour Simon
Viking, 1971

Let's Make a Kite
J. Stokes
McKay, 1976

Balls and Balloons
Wind Play (Science is Fun series)
Ed Catherall
Wayland Publishers Ltd., 1986

Georgie and the Runaway Balloon
Robert Bright
Doubleday, 1983

My Balloon
Catherine Chase
Dandelion Press, 1979

Byron and His Balloon (An English-Chipewyan Counting Book)
The Children of La Loche and Friends
Tree Frog Press, 1984

"Eight Balloons"
From: A Light in the Attic
Shel Silverstein
Harper & Row, 1981

The Big Balloon Race
Eleanore Coerr
Harper & Row, 1981

King Rollo & the Balloons
David McKee
Creative Educational, 1982

Too Many Balloons
Catherine Matthias
Children's Press, 1982

Benjamin's Balloon
Janet Quin-Harkin
Parents Magazine Press, 1979

Balloon Trip
Ron Wegen
Houghton Mifflin Co., 1981

The Little Boy and the Balloon Man (A Tiger Cub Reader)
Robert A. McCracken, Marlene J. McCracken
Leswing Press, 1976

Flying, Gliding and Whirling: Making Things That Fly
Carol Nicklaus
Franklin Watts, Inc., 1981

My Kite is the Magic Me
Helen Webber
Astor-Honor, 1968

The Flyaway Kite
Gyo Fujikawa
Putnam Publishing Group, 1981

The Dragon Kite
Nancy Luenn
Harcourt Brace Jovanovich, 1982

Curious George Flies a Kite
Margaret Rey & H.A. Rey
Houghton Mifflin, 1958

The Big Kite Contest
Dorotha Ruthstrom
Pantheon Books, 1980

Mike's Kite
Cindy and Zach Clements
Modern Curriculum Press, 1979

The Emperor and the Kite
Janet Yolen
World Publishing Co.

Air is All Around You
Franklin M. Branley
Harper & Row, 1962

Air
David Lloyd
Dial Books for Young Children, 1983

Airplanes & Balloons
Howard W. Kanetzke
Raintree Publishers, 1978

Little Airplane
Lois Lenski
Mckay, David Co., Inc., 1938

Snoopy's Facts & Fun Book About Planes
Charles M. Schulz
Random House, 1979

Wind is Air
Mary Brewer
Childs World, Inc., 1976

How the Wind Blows
Katherine D. Marko
Abingdon Press, 1981

What Makes the Wind?
Laurence Santrey
Troll Associates, 1981

Please, Wind?
Carol Greene
Children's Press, 1982

The Wind Blew
Pat Hutchins
Macmillan, 1974

It Must Have Been the Wind
Barney Saltzberg
Harper & Row, 1982

Lullaby of the Wind
Karen Whiteside
Harper & Row, 1984

Too Fat to Fly
Adelaide Holl
Garrard Publishing Co., 1973

Up & Up
S. Hughes
Prentice Hall, 1979

Tattie's River Journey
Shirley Murphy
Dial Books for Young Children, 1983

What Are We Going To Do About Andrew?
Marjorie W. Sharmat
Macmillan, 1980

Gilberto and the Wind
Marie Hall Ets
Viking Press, 1963
(also available as a filmstrip from Weston Woods)

Wind is to Feel
Shirley Cook Hatch
Coward, McCann, Geoghegan Inc., 1973

Hot Air Balloons
Ed and Ruth Radlauer
Bowmar, 1974

The Ball That Wouldn't Bounce
Mel Cebulash
Scholastic Book Services, 1972

The Dragon in the Clock Box
Jean M. Craige
W.W. Norton, 1962

I see the Winds
Lazue Mizumura
Thomas Crowell, 1966

Who Took the Farmer's Hat
Joan L. Nodset
Scholastic Book Services, 1970

Great Big Air Book
Richard Scarry
Random House, 1971

Plenty of Fish
Millicent Selsam
Harper & Brothers, 1960

Follow the Wind
Alvin Tresselt
Lothrop, Lee & Shepard, 1950

Teacher's Resources

Cast Your Class to the Wind
Edward Corbin
WEDGE, 1973

Parachutes
Mark Gibbs
WEDGE, 1975

Science on a Kitestring
Frank Heyman
WEDGE, 1974

The Great International Paper Airplane Book
Howard Gossage and others
Simon and Shuster, 1970

Teaching Primary Science - Aerial Models
Macdonald, 1978

Amazing Air
Henry Smith
Child's Play, 1982

Science Experiences for Young Children: Air
Rosemary Althouse and Cecil Main
Teachers College Press, 1975

Air
David Lloyd
Methuen Children's Books Ltd., 1982

Air
Macdonald First Library
Macdonald and Company (Publishers) Limited, 1970

Balls and Balloons
Wind Play
Science is Fun series
Ed Catherall
Wayland (Publishers) Ltd.

Films, Filmstrips and Slides

OWL/TV
National Audubon Society and Young Naturalist Foundation
- Program 4 - Wind Art
- Program 6 - Hot Air Balloons
- Program 7 - Gyroscopes
- Program 8 - Kites

What Air Can Do (Wonder of Learning Kit)
National Geographic Society, 1983

Miscellaneous

RESOURCES: RELATED ABORIGINAL LANGUAGE MATERIALS

Byron and His Balloon (An English-Chipewyan Counting Book)
The Children of LaLoche and Friends
Tree Frog Press, 1984

INITIAL ASSESSMENT ACTIVITIES - GRADE ONE

The following activities should be done before you teach any of the lessons. They will assist you to determine:

1. what students already know about the concepts of the topic and therefore where instruction should begin;

2. what interests students have in the topic and therefore the direction the unit should take; and

3. what language students already have to discuss the topic and what language they require.

One of the basic principles of the Language Development Approach and of all good teaching is that you should start with the student when planning and carrying out a unit. Before you begin to teach it is important to assess your students' knowledge of and interest in the topic. You should determine what students already know about the topic/concepts you intend to cover. What ideas do students already have? What misconceptions do they have which you must address? What gaps are there in their knowledge which require that you teach certain lessons? What concepts do they know well enough so that you can skip the lessons which teach those concepts? What questions do they have? What relationships do they see between different aspects of the topic?

It is also important to identify what experiences students have which relate to the topic/concepts. By identifying these and building upon them in the lessons you can help students relate the new ideas and information to their own lives. It is important to do this because it assists students to internalize new concepts. It helps students make the concepts part of the conceptual framework which they use to understand and describe their world. If they do not have concrete, firsthand experiences to relate to each concept you will have to provide them wherever possible.

Another use for these activities is to help you identify particular interests of individuals, groups of students, or the whole class. You can then include activities in the lessons which involve student interests, thereby increasing motivation for them to participate and learn. You may decide to add, substitute or omit some lessons because of students' interests.

These activities will also help you determine what language students have to discuss the topic. You can find out what vocabulary items students already know and what associations they have for each word. It is important to ascertain the meanings students attach to words; sometimes their interpretations may surprise you! If they do not clearly understand terms or use them incorrectly, it will prevent them from understanding and incorporating the concept into their mental framework.

1. Brainstorming

   Look at pictures of balloons. Establish, through discussion, that the balloons have air in them. Ask students to tell you what they know about air. Record their answers on cards and hang them on masking tape strips (sticky surface up) which you fasten to the wall or the chalkboard.

If students have difficulty with this activity you may wish to direct their thinking or prompt ideas by asking more specific questions:

"Have you ever seen air?
What do you know about air?
What might happen if there were no air?"
Etc.

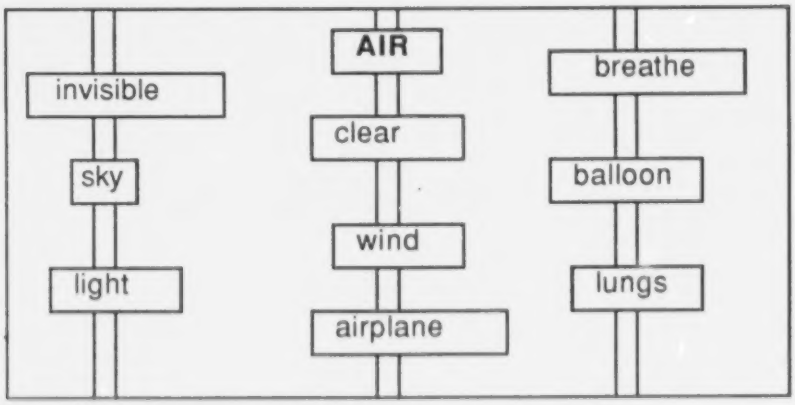
Encourage students to predict answers to these questions even if they aren't sure of the exact responses. It might be interesting to record their predictions separately and compare them to the actual answers as you study the unit. Students may think of their own questions as well. Keep a list of all the questions the class cannot answer to focus the lessons you teach during the unit.

After you record their responses on the cards, have students chant the words with you. Talk about the words: Which word is the most interesting? the least interesting? the most puzzling? What other word can you think of that means almost the same thing? What comes to your mind when I say _____? What do you think this word means? Etc.

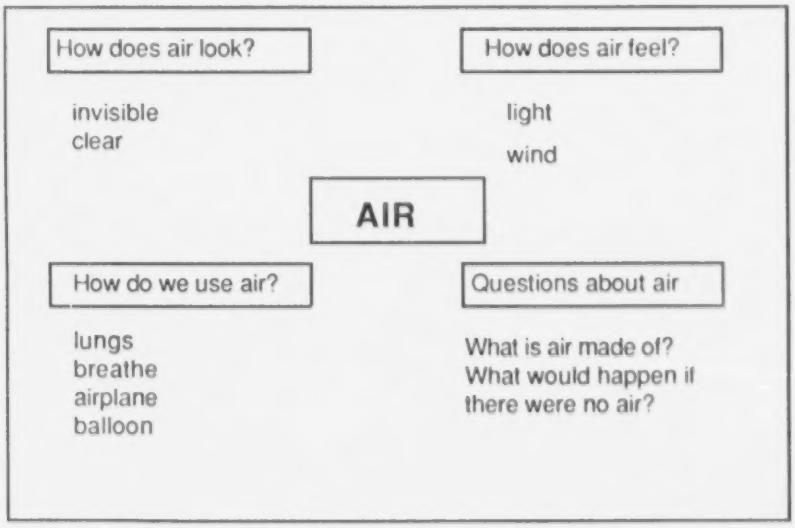
2. Categorizing:

Distribute the word cards from the brainstorming session. Be sure to tell students the words you give them. Give younger students only one card at a time so they will not get confused. Have one student place his/her word card at the top of one of the masking tape strips and tell the word to the class. Ask if there is anyone else who has a word that belongs with the first word. Have another student place his/her word card under the first, read the word and explain why it belongs with the first word. Give a title to these two cards which now form a category. Ask if anyone can start a new category. When students have placed all of the brainstormed words in categories, discuss the titles and change them if necessary. Chant the words in each

category with students. Transfer the words to a flowchart to provide a permanent reference.



As you teach the unit you may wish to add new information to the chart. You may also identify new questions and, hopefully, the answers. At the end of the unit you can review the chart with students. Keep it as a reference for future use.



SAMPLE QUESTIONS

You can use these questions during the initial assessment activity to determine what experiences, language, and knowledge students have about the topic. You can also use the questions for assessing thinking processes throughout the concept development and application phases of each lesson and during the culminating and evaluation activities.

QUESTIONS FOR ASSESSING EXPERIENCE:

1. Have you been in a situation where _____?
2. What do you know about _____?
3. Have you ever seen _____?
4. Have you ever experienced _____?
5. Have you ever been _____?
6. Have you ever done _____?
7. Has something like this ever happened to you?
8. When was the last time you _____?

QUESTIONS FOR ASSESSING LANGUAGE:

1. What do you think these words mean?
2. Can you give me another word that means _____?
3. What comes to your mind when I say _____?
4. Have you heard of the word(s) _____?
5. What words can you think of when I say the word _____?

QUESTIONS FOR ASSESSING THINKING PROCESSES:

Cognitive Memory (details, information)

1. Who.....?
2. What are the facts?

3. What are the most important details?
4. What is the.....?
5. What do you mean by.....?
6. What is your interpretation of what happened? (What do you think happened?)
7. When?
8. Where?

Convergent/Generalizing (getting the main idea)

1. What are the chief points?
2. Given that information, what is the main idea?
3. What is the single most important idea?
4. State the idea in one sentence.
5. Explain _____.

Structuring/Relating (arranging relationships)

1. Categories: Which group does that belong to?
   How would you classify.....?
   What type would you.....?
2. Comparisons: How are they alike? same? similar? identical?
3. Contrast: How is it different? in opposition to? unlike?
4. Cause and Effect: What will happen if? Why?
   What will happen as a result of?

Divergent/Using/Applying

1. What might happen if _____?
2. If you use that idea, what would it mean for _____?
3. Apply that idea to our (this) situation.
4. What would result if _____?
5. If you were given these facts, what would you do to _____?
6. How would it be different if we used this idea?
7. What could the advantages/benefits be if we applied this idea/process?
8. What do you think the (story/paragraph) will be about?

Evaluation/Judging/Valuing

1. How do you feel about this idea?
2. What is your opinion?
3. What is the best _____?
4. Are you satisfied with that answer/plan?
5. Can this statement be made? Why?
6. Out of all the information, what can be used to prove your point?
7. How would you judge?
8. What is your opinion or conclusion about the product/plan/idea?
9. Why did you think it worked/didn't work?
10. What is fact? What is opinion?

Science/Social Studies	Teacher's Notes
1. Cut pictures from magazines. Classify them as "Things that need air" and "Things that don't need air." 2. Brainstorm ways to use the air pressure released from a balloon, e.g., blowing a whistle 3. Provide a table of objects with which students can investigate air. Include a bicycle pump, a foot pump, a turkey baster, an aquarium filled with water, an eyedropper, balloons, straws, a sponge, several inflatable toys, etc. 4. Invite the nurse to your classroom to discuss how lungs work and how they use air. 5. Get two empty drinking glasses and an aquarium filled with water. Put an empty glass in the aquarium and let it fill with water. Tilt the empty glass so the bubbles go into the water filled glass. You can pour air back and forth this way.	These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

ACTIVITY IDEAS

TOPIC A: PROPERTIES OF AIR/BALLOONS

Math	Language Arts
1. Make worksheets incorporating the balloon theme. 2. Use balloons to teach a variety of size and shape concepts: big/small long/short round/oval etc. 3. Estimate the number of balloons in a bag. Estimate the number of each colour. Chart the results and compare to estimations. 4. Teach addition facts using balloons and the following chant: Balloons, balloons so bright and gay Look at my pretty balloons today. _____ in my left hand and _____ in my right How many balloons so round and bright?	1. Write new vocabulary items on balloons with felt markers. Hang the balloons around the room. 2. Use balloons to teach colour words. 3. Write secret messages to friends. Put them in balloons marked with the friends' names. 4. Brainstorm words that rhyme with "air." 5. Write a chart story with students about "The Balloon That Got Away." Use a story grid to help plan the story: Beginning Characters Ending Setting Actions/Problems Brainstorm possibilities for each of the above categories with students. Write an initial draft. Review it with students and discuss changes that could make the story better. Rewrite until all are satisfied with the product.

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Music, Poems, Stories

1. Make a bottle band. Have students make sounds by blowing across the mouths of the bottles. Experiment with changing the pitch of any bottle by changing the amount of air space inside (i.e., by adding or removing water).
2. "My Red Balloon"
3. "Up in a Balloon"
4. "Balloons"
5. "My Balloon"
6. "The Red Balloon"
7. "Three Balloons in the N.W.T."
8. "Red Balloons, Blue Balloons"
9. "Little Balloon"
10. "No More Balloons"
11. "The Tire"

Art

1. Make balloon mobiles. Use different shaped/coloured/sized balloons.
2. Cover balloons with papier mache. When they dry, pop the balloons inside. Use the shapes to make piggy banks, pinatas, heads, etc.
3. Dip lengths of kitchen twine (string) in a thick laundry starch mixture. Wrap the string around an inflated balloon. When the string has dried and hardened, pop the balloon. Use shapes to decorate your classroom.

Physical Education/Movement

1. Balloon Volleyball: Tie a rope between two sticks. Hit a balloon back and forth over the rope with a friend. You score one point if the balloon hits the ground on your friend's side of the net.
2. Have a balloon blowing contest. Who can keep their balloon in the air the longest?
3. Have students pretend to be balloons that are blown into different shapes. They should start as flat limp shapes on the floor. As you pretend to blow air into them they begin to grow. When they have stretched as large as they can be, pretend to prick each imaginary balloon. Each should then collapse onto the floor.

Special Activities

1. If possible visit the community garage to observe the uses of air. Have the mechanic demonstrate how the air compressor works, how s/he inflates tires quickly, etc.
2. Blow soap bubbles outdoors and watch them float up into the sky.
3. Make a balloon rocket: Thread a needle with about 10 feet of thread. Drop it through a straw. Tie one end of the thread to one chair and the other end to another chair. Move the chairs apart until the thread is tight. Blow up a balloon a couple of times so that it can be blown up up easily. Tape the balloon to the straw. Blow up the balloon and hold it closed. Move the straw and balloon to one end of the thread and let go of the balloon. The air escaping from the balloon will drive the straw very fast down the thread.

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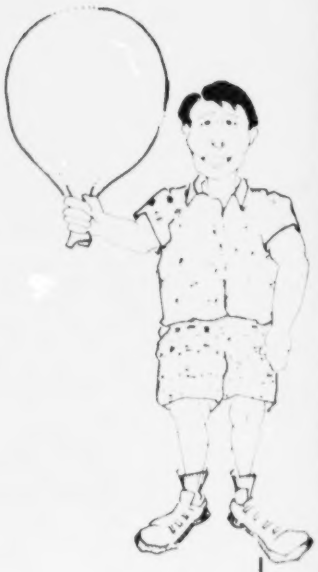


Lesson: Air is Everywhere (Grade One)

As this lesson emphasizes language related to Science concepts, you may wish to teach it during your Science period.

Science Concepts

1. Air is a gas and is everywhere.
2. Air takes up space.

English Vocabulary (*actually developed in this lesson)

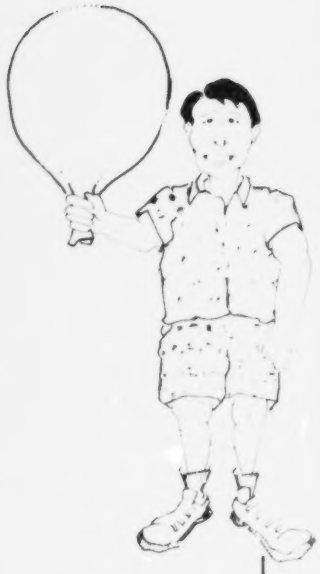
* see
* feel
* hear
* taste
* smell

English Sentence Patterns (*actually developed in this lesson)

* Can you see/feel/hear/taste/smell air?
* You can hear/feel air when _____.
* You can't see/taste/smell air.
* You can see/taste/smell _____ in the air when _____.

Special Materials Required

Sense tables
Tin can
Plastic squeeze bottles or tubes
Clear plastic bags
Perfume, cigarette, KoolAid
Observation charts



Concept Development/Language Exposure

1. Review the five senses by having students work at "sense tables" in small groups. For example:

   a) "What can you hear?" - Record various familiar sounds. Place tape and tape recorder at table. Students guess what the sounds are.

   b) "What can you smell?" - Provide blindfolds and items with distinctive smells. Students guess what they are smelling while blindfolded.

   c) "What can you feel?" - Place familiar objects in feely bags. Students feel the objects and try to guess what they are.

   d) "What can you taste?" - Provide blindfolds and familiar foods. Students guess what items they are tasting.

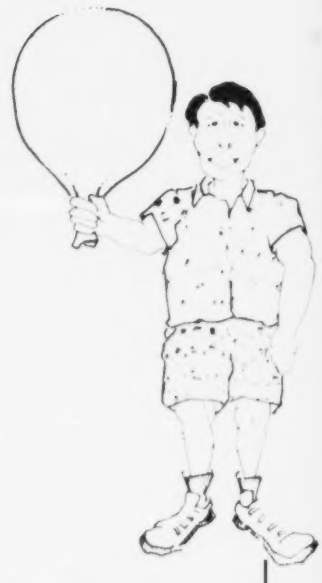
   e) "What can you see?" - Provide hidden object pictures. Students attempt to find the hidden objects.

2. a) Show students an empty tin can and ask, "Is there anything in the can?"

   Punch a hole in the bottom of the can. Invert the can and slowly push it into a deep container of water. Have students hold their hands over the hole. What do they feel? Can they hear anything? Ask students if the can really was empty. What was in it? Model the sentence pattern, "You can feel/hear air when you push the can into the water."

   b) Give each student an empty squeeze bottle or tube and ask, "Is your bottle empty?" Have students point the containers at their chins and squeeze. What do they feel? Can they hear anything? Model the sentence pattern, "You can feel/hear air when you squeeze the bottle." Have students try to squeeze all the air out of their containers. Could they do it?

   c) Have students make paper fans by folding pieces of paper back and forth again and again (accordian style). Have them fan their faces. What do they feel? Can they hear anything? Model the sentence pattern, "You can feel/hear air when you fan your face."



3. Give each student a clear plastic bag. Ask them to scoop some air into their bags. Ask them:

"Where did you get the air?"
"What colour is it? Can you see it?"
"Can you taste it?"
"Can you smell it?"
"Can you feel it?"
"Can you hear it?"

Discuss students' responses.

Have students collect bags of air from different areas of the school and from outside. Was there anywhere that they couldn't find air?

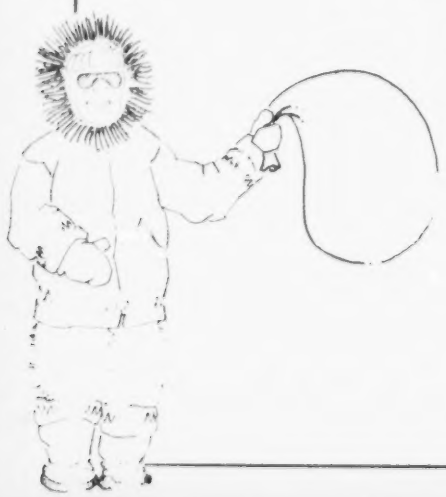
4. a) Use the cans or tubes from previous activities. Distribute them to students. Teacher pretends to taste/smell/look at the air from his/her can and asks students to do the same. Ask, "Can you taste/smell/see air?" Discuss students' responses and model sentence patterns.

b) Have students close their eyes. Light a cigarette. Ask students what they see. Where is the smoke? (In the air.) Model the sentence pattern, "You can see smoke in the air when you light a cigarette." Make a list of other things you might see in the air.

c) Have students close their eyes again. Spray some perfume in the air. Ask students what they smell. Where is the perfume? (In the air.) Model the sentence pattern, "You can smell perfume in the air when you spray it."

d) Have students close their eyes and stick out their tongues. Using a plant mister, spray some KoolAid close to their faces. Ask them what they taste. Where is the KoolAid? Model the sentence pattern, "You can taste KoolAid in the air when you spray it."

Language Practice



L 1. Yes/No: Provide each student with a YES and a NO card. Make statements about air using the sentence patterns. If students agree with a statement, they hold up their YES cards; if they disagree, they hold up the NO cards. For example:

Teacher: "You can smell air." Students display NO cards.

Teacher: "You can smell smoke in the air when a fire is burning." Students display YES cards.

L 2. Change Game: Students stand in pairs, back-to-back, with elbows interlocked. Make a statement about air. If the statement is true, students must change partners.

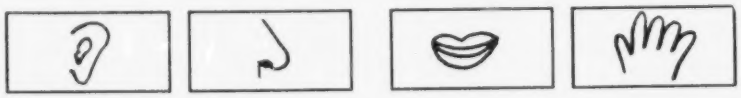
L/S 3. Parrots: Make a series of statements about air. Students are parrots and repeat what the teacher says. They repeat only true statements, however.

L/S 4. Catch the Error: Make statements about air; some of the statements should contain errors. Students try to catch the errors and provide the correct words. For example:

Teacher: "You can smell perfume in the air when someone smokes a cigarette."
Students: "You can smell smoke in the air when someone smokes a cigarette."

L/S 5. Double Circles: Divide class into two groups by numbering off - "one-two-one-two-etc." All "ones" stand in a circle facing out. The "twos" form a circle around the "ones" with each "two" facing a "one." "Ones" ask questions of the "twos" facing them (using the sentence pattern). After "twos" have answered, they move one step to the right so they are facing a new partner. Continue in this manner until students are back to their original partners. Then "twos" will ask questions of the "ones."

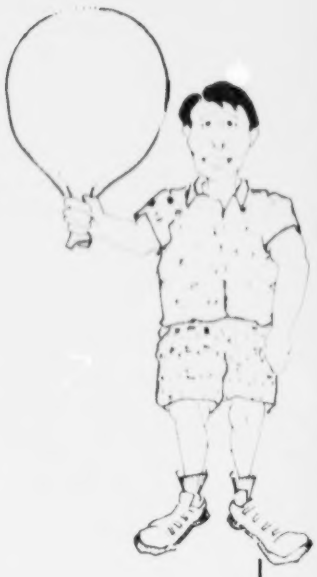
S 6. Draw illustrations on cards as shown below:



Model the sentence patterns for each illustration, for example:

"You can hear air."

"You can't smell air."



Place the cards face down in the centre of a circle of students. Pass a balloon around the circle; when the teacher claps, the student holding the balloon should pick a card, repeat the appropriate sentence pattern, then act it out using the balloon.

R 7. Introduce the statements in written form by placing sentence strips in a pocket chart:

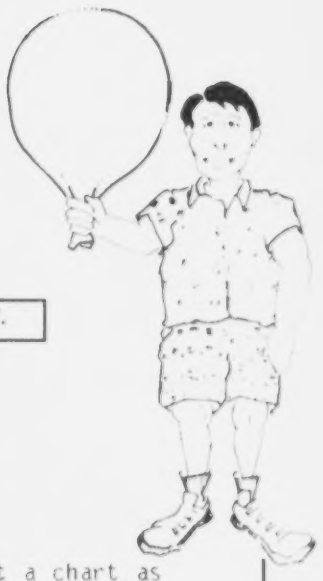
Can you see air?

You can't see air.

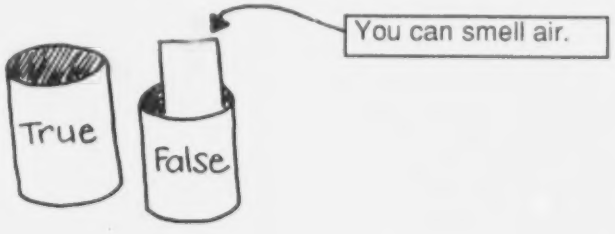
Read the strips several times with students. Pass out questions to some students and statements to others. Have students find their partners and replace the question/answer pairs in the pocket chart.

Can you see air?

You can't see air.



R 8. Classification Containers: Make up statements about air; some should be true and others should be false. Students read the statements, then place them in the appropriate container. This could be done in pairs or as a centre activity.



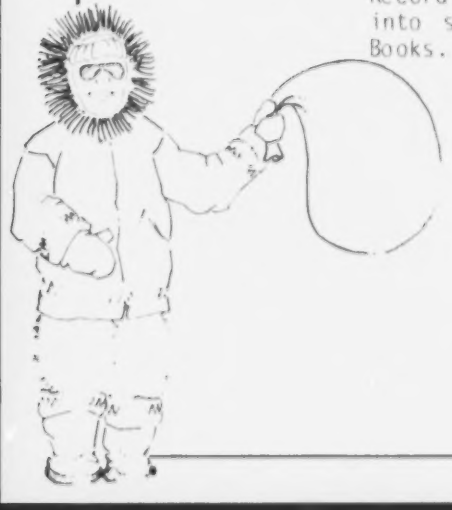
R/W 9. a) Go for a walk to observe air. Give each student a chart as shown below on which to record their observations. Students may use words or illustrations to describe their observations.

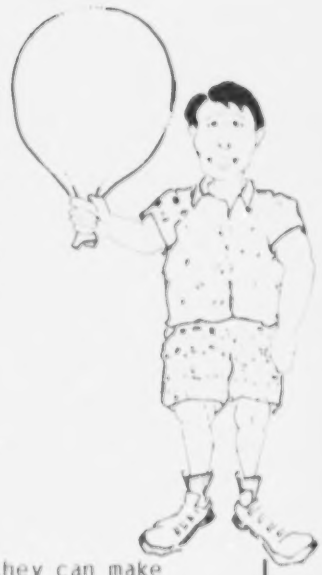
feel	hear	see	smell	taste
wind blowing	wind blowing	branches moving		
	flags flapping	smoke from chimneys	smoke	smoke
		paper blowing on road		

b) Have students refer to their charts to complete the following statements:

I can feel air when .....
I can hear air when .....
I can smell ..... in the air.
I can see ..... in the air.
I can taste ..... in the air.

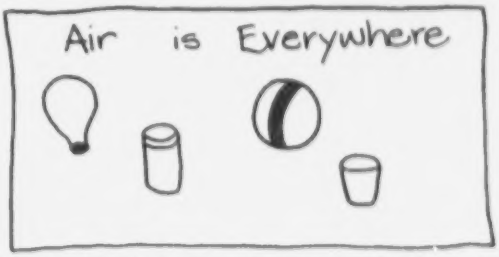
Record their statements on charts. These could then be cut into sentence strips, illustrated and put together as Big Books.





Application

1. Have students collect real objects and pictures (containers, soil, balloons , balls, etc.) to use for a bulletin board entitled "Air is Almost Everywhere." Label all items. In conjunction with this activity you may wish to discuss places where air is not found (i.e., space, vacuum).



2. Have students experiment to see how many different sounds they can make with air. (Let air out of balloons quickly/slowly, whistling, blowing, etc.)

3. Make up little rhymes about air, for example:

Air, air, air
Air is everywhere
We can't taste it
We can't see it
But we know it's there.

Lesson: Air Takes Up Space (Grade One)

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

Science Concepts

1. Air takes up space.

English Vocabulary (*actually developed in this lesson)

* shape
* flat
* bulge/bulging
* thin
* fat
* full
* empty
* bigger
* smaller
* balloon
* ball
* tire
* rubber raft
* plastic bag
* other inflatable items

English Sentence Patterns (*actually developed in this lesson)

* What happens when you put air into a balloon/tire/plastic bag/etc.?
* When you put air into a _____ it _____.

* What happens when you take air out of a _____?
* When you take air out of a _____ it _____.

Special Materials Required

Clear plastic bags
Balloons
Balls, inflatable toys, tire (or pictures)
Bubble solution/styrofoam cups/straws
Unused aquarium/clear plastic glass/straw
Plastic sandwich bags/wide-mouthed glass jars (pickle jars)
Vanishing drill worksheet

Concept Development/Language Exposure

NOTE: You will not need to do all of the concept development activities listed below. Do only the number required to develop the concepts and associated language. In each activity, ask students to predict the outcome of the experiment. Compare results to predictions. Model vocabulary and sentence patterns in a natural way during discussions about the experiments. Some of these experiments may also be used as Application activities.

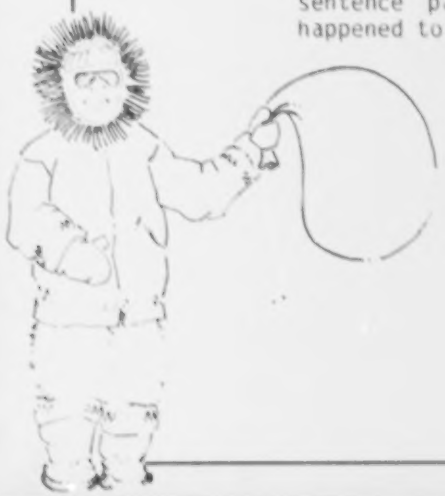
1. Place some empty plastic bags on a table. Be sure there is no air in the bags. Ask students: "What can you tell me about the bags? Do you see anything inside them?" Brainstorm words that describe the bag (e.g., flat, thin, etc.). Put different materials (blocks, plasticene, crayons, etc.) in the bags, leaving one bag empty. Ask students: "Have the bags changed? Are they fatter? Do they bulge? Can you see what's inside them?" Elicit words to describe the way the bags look now. Compare the filled bags to the empty bag. Tell students to watch what you do with the empty bag. Open it and move it through the air. Twist the top of the bag to keep the air inside. Ask students "What happened to the bag? Is there something inside the bag? What makes it bulge? Where did the air come from? Can you see it?" Discuss students' responses. Give students plastic bags and allow them to experiment with them. Model sentence patterns.

2. Have all students place their hands on their chests and breathe deeply. What did they feel? Why did their chests puff out? Have them hold kleenexes near their noses and mouths and exhale. What happens? Have them experiment with inhaling and exhaling air through their mouths only (pinch nostrils) and through their noses only (mouths closed). Are there two ways for air to go in and out?

3. a) Give each student a deflated balloon and allow them to experiment freely for a few minutes. Talk about the things students discovered about the balloons.

   b) Show students a deflated balloon. Tell them to watch as you inflate and tie it. Ask: "What is happening to the balloon? What is inside the balloon? Where did the air come from?" Model sentence patterns. Pop the inflated balloon. Ask: "What happened to the air inside the balloon? Where did it go?"

   c) Brainstorm a list of other objects that we inflate with air. Look at real examples or pictures of these objects. How do they look when they are not full of air?



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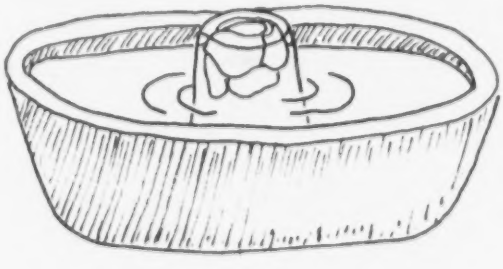
4. Prepare a bubble solution with liquid soap and water and pour it into several shallow containers. Provide each student with a styrofoam cup and a straw. Have them use a pencil point to make a small hole inside of the cup about one inch from the bottom and insert the straw. Have them place the open end of the cup in the bubble solution and then remove the cup. A film will form across the opening of the cup. Have them hold the cups upside-down and blow gently through the straws. Large bubbles will form as they blow. Ask: "What is inside your bubble? How did the air get inside? Where did the air come from? Can you think of a way to make your bubble smaller?" Allow students to experiment - some will discover that they can control the size of the bubbles by blowing less air through the straws. Some may remove air from their bubbles by bursting them while others may discover that they can make the bubbles smaller by sucking air back through the straws. Model the sentence patterns as students experiment.

5. a) Fill an unused aquarium or large plastic tub with water. A transparent container will provide greater visibility. Have students use straws to blow air into the aquarium. Ask: "What happens when you blow into the water? What is inside the bubbles? Where did the air come from?" Discuss responses. Submerge a clear plastic glass in the water so that it fills the water. Turn the glass upside down while it is under the surface of the water. Place one end of a straw under the glass. Blow through the straw and displace the water inside the glass with air. Ask: "What happened when I blew air into the glass? Were there any bubbles? What was in the glass before I blew the straw? What is in the glass now?" Allow students to repeat the activity.

   b) Wad a paper towel into a ball and place it firmly in the bottom of the glass. Turn the glass upside-down and push it down to the bottom of the aquarium. Ask students what they think will happen to the paper towel. After a moment, pull the glass straight out of the water. Let students feel the paper towel. Is it wet or dry? Why?



6. Show students a plastic sandwich bag and a wide-mouthed jar. Ask:"What is inside the jar? Inside the plastic bag?" Invert the bag over the mouth of the jar. Blow a little air into the bag so that it is inflated over the jar. Tape the bag to the jar so that it is airtight. Ask a student to try to push the bag into the jar without tearing it. Ask: "What is holding the bag out of the jar? How could we get the bag inside the jar?"

7. Hold up pictures of inflated/deflated items. Model appropriate sentence patterns.

"What happens when you put air into a beachball?"

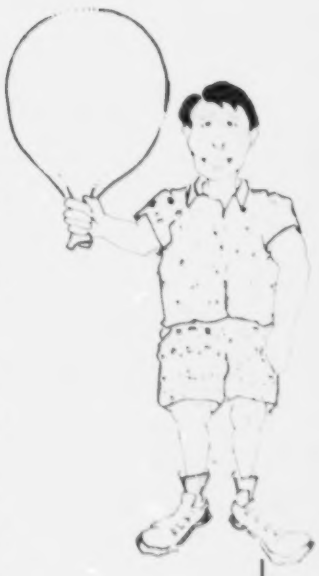
"When you put air into a beachball it gets bigger."

Language Practice

L 1. True/False Chairs: Place two chairs together. Label one TRUE and the other FALSE. Divide students into two teams and stand them in lines facing the chairs. Make a statement. The first player from each team races to sit on the correct chair. For example:

Teacher: "When you put air into a tire it gets bigger."
Students race to sit on TRUE chair.

L 2. Which Picture: Display pictures of inflated/deflated objects around the room. Ask a question about one of the items using the sentence pattern, for example: "What happens when you take air out of a tire?" Select one student to point to the appropriate picture. Model the response, for example:



L/S 3. Balloon Release: Sit in the centre of a circle of students with a balloon. Inflate the balloon. Make a statement (using the sentence pattern) and release the balloon. When the balloon reaches one of the students, s/he should repeat the statement.

L/S 4. Substitution Drill: Make a statement; then provide a word for students to substitute.

E.g., Teacher: "When you put air into a balloon it gets bigger. Plastic bag."
Students: "When you put air into a plastic bag it gets bigger."

L/S 5. Balloon Release: Inflate a balloon but don't tie it off. Ask a question using the pattern and release the balloon. The student who catches it answers the question, re-inflates the balloon and asks another question. For example:

Teacher: "What happens when you put air into a tire?" (Releases balloon.)
Student: "When you put air into a tire it gets bigger." (Inflates balloon.)
"What happens when you take air out of a balloon?" (Releases balloon.)

L/S 6. Riddles: Make up clues about one of the inflatable objects, for example:

I'm thinking of something round.
You need it on a car.
When you put air into a hmmmm it gets bigger.
When you take air out of a hmmmm it gets flat.

Students guess what the object is and repeat the statements, for example:

"It's a tire.
When you put air into a tire it gets bigger.
When you take air out of a tire it gets flat."

S/R 7. a) Have students look through magazines and catalogues to find pictures of things that can be inflated (balloons, rubber rafts, swimming pools, toys, balls, tires, etc.). Have them mount their pictures on cards. Have students, in turn, place their pictures in the pocket chart and dictate statements using the sentence patterns. Record their statements on sentence strips and place them next to the pictures, for example:

"When you put air into a tire it gets bigger."

"When you take air out of a tire it gets smaller."

"When you put air into a balloon it gets bigger."

Have individual students read their statements. Read the statements with the whole class.

b) Cut the statements into words. Have students reconstruct the statements.

R/W 8. Vanishing Drill: Do this activity together as a class (use the overhead projector) first; then have individuals complete the worksheet.

W 9. Individual Books: Have individuals or pairs of students draw or locate pictures of inflatable items. They should then write statements about the items using the sentence patterns.

Application

1. In pairs or at an activity centre, have students put pictures in sequence of someone inflating a balloon.

2. Learn the song "My Balloon." Have students pretend to be balloons that are being inflated. Have them start as flat, limp shapes on the floor. As air is blown into them they get bigger and bigger and float gently around the room. Then they are released and zoom around, getting smaller and smaller until they are flat and limp again. Present the song on sentence strips in a pocket chart. Have students do various chart activities.

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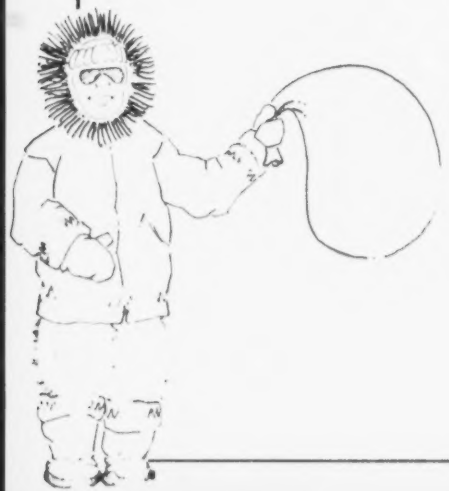
3. a) Have students assist you in whipping some cream. Note the volume of the cream before and after whipping. What caused the increase?

   b) Make desserts that require the addition of lots of air, for example:

   mousses
   angel food cakes
   meringues
   etc.



Lesson: Air Has Weight (Grade One)

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

Science Concept

1. Air has weight.

English Vocabulary (*actually developed in this lesson)

* light/lighter
* heavy/heavier
* weigh
* weight

English Sentence Patterns (*actually developed in this lesson)

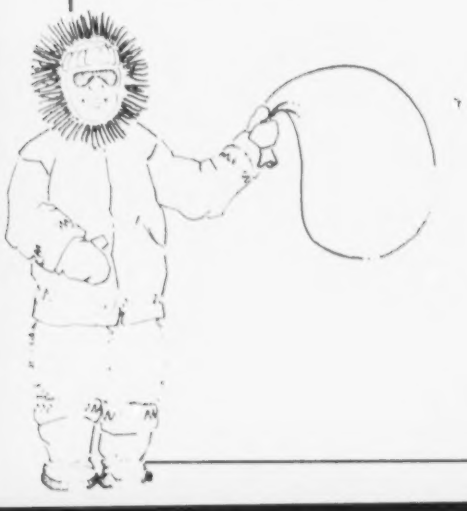
How much do/does _____ weigh?

_____ weighs _____.

* Which _____ is heavier/lighter?
* _____ is heavier/lighter than the _____.

Special Materials Required

Balloons, balance
Weighing scale (kitchen scale)
Pictures of inflated/deflated objects
Inflatable beachball
Worksheet



Concept Development/Language Exposure

1. Introduce concepts of lighter/heavier using real objects:

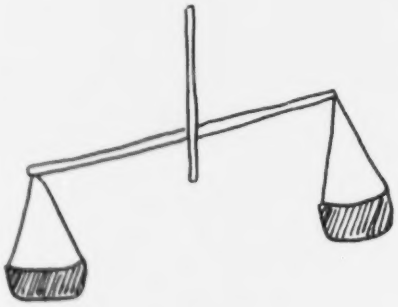
   a) Have each student pick up a book in one hand and a pencil in the other. Ask: "Which object is heavy? Which is light?" Model the sentence pattern: "The book is heavier than the pencil. The pencil is lighter than the book." Repeat with other objects.

   b) Weigh students; model the sentence patterns as you compare their weights.

2. a) Ask students if they think air has weight. Ask them to explain their responses. Have them try to think of ways in which you could find out if air does/doesn't have weight. Try their suggestions.

   b) Introduce the following experiment as a way in which you think you can show that air <u>does</u> have weight:

   Make a balance using plastic margarine tubs, string and a ruler. Place a deflated balloon in each of the tubs. Tell students you are going to blow up one of the balloons. What do they think will happen to the balance? Carry out the experiment. What happened? (The tub holding the inflated balloon went down.) Which balloon was heavier? lighter? What is inside the heavier balloon? Does air have weight? Model the sentence patterns: "The balloon that is full of air is heavier than the empty balloon. The empty balloon is lighter than the balloon that is full of air."



Repeat the experiment using plastic bags.

3. Use a scale to measure the weight of an inflated ball. Record the weight. Push some of the air out of the ball and weigh it again. Record the weight and compare it to the weight of the fully inflated ball. What happened? Model the sentence patterns.

Language Practice

L 1. Balloon Blow Up: Provide each student with an uninflated balloon. Tell them to listen for a specific word or sentence. When they hear the word/sentence they should blow some air into their balloons.

E.g., Teacher: "Blow some air into your balloon when you hear the word heavier. Higher, hairier, heavier, heftier, heavier, handier, etc."

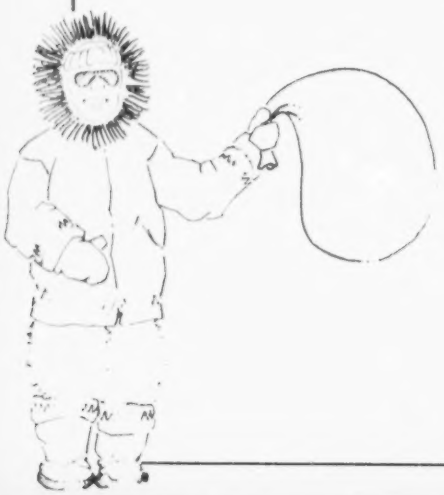
L 2. Here, There and Everywhere: Tape pictures of the inflated/deflated items around the classroom. Make a statement about one of the pictures. Students run/hop/skip to the appropriate picture.

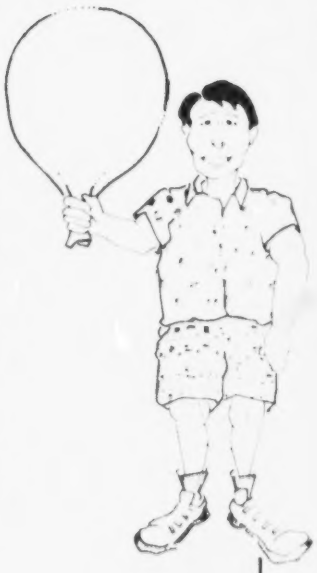
Teacher: "The beachball that is full of air is heavier than the beachball that is empty." Students hop to the picture of the beachballs.

L/S 3. Beachball Toss: Stand in the centre of a circle of students holding a beachball. Make a statement (using one of the sentence patterns), then toss the ball to one of the students. That student must repeat the statement, then toss the ball back.

L/S 4. Hot Potato: Place pictures (clip together in pairs) in a bag. Have students sit in a circle and pass the bag around until they hear the signal to stop. The student holding the bag withdraws one of the picture pairs and answers teacher's questions about them, for example:

Teacher: "Which ball is heavier?"
Student: "The ball that is full of air is heavier than the empty ball."
Teacher: "Which ball is lighter?"
Student: "The ball that is empty is lighter than the ball that is full of air."





S 5. London Bridge: Two students form a "bridge" with their arms. The other students walk under the bridge as music plays. When the music stops, the bridge drops and traps one student. That student chooses a matching pair of pictures and asks the others a question about them using the sentence pattern. The others must respond using the sentence pattern. For example:

Student: "Which beachball is lighter?"

Class: "The beachball that is empty is lighter than the ball that is full of air."

S/R 6. Make up sentence strips and word cards as shown:

Which _____ is _____ ?

heavier

lighter

The _____ that is _____ is _____.

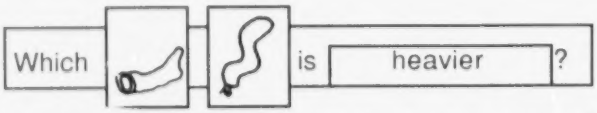
full of air

empty

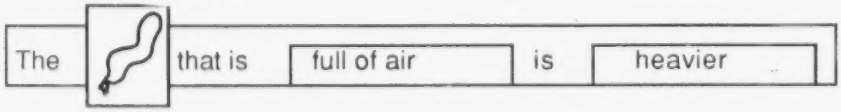
heavier

lighter

Place the question in the pocket chart with picture cards and word cards. Read it with students.

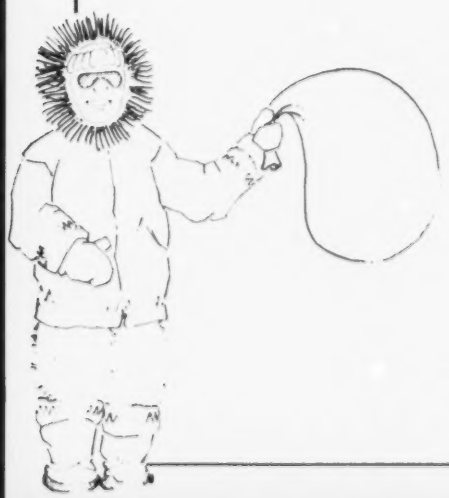


Have them respond orally. Demonstrate how to build the response in the pocket chart.



Repeat with other examples.

Remove word cards and distribute to students. Have them replace them in the pocket chart to make question/answer pairs.



R/W 7. Work through the worksheet with the whole class using the overhead projector. Then provide each student with a copy of the worksheet to complete individually. Leave the sentence strips (Activity #5) in the pocket chart to serve as models.

Application

1. Discuss the concept of size as it relates to weight. Is something big always heavier than something small? Have students find examples of pairs of objects where the larger object is lighter than the small one (feather/penny, empty cardboard box/rock, etc.).

2. Make books using frame sentences: A _____ is heavier than a _____ OR A _____ is lighter than a _____.

3. Have students cut pictures from magazines to use in making HEAVY/LIGHT books.

4. Set up a weighing centre. Have students find different materials from around the classroom to compare and weigh. Students can work in pairs. Each student picks two objects, both students predict which will be lighter/heavier and each student weighs his/her objects. Students should record and compare their predictions to the actual results. Periodically pairs should report their comparisons to the class.

Lesson: There Is Oxygen in Air (Grade One)

As this lesson emphasizes language related to Science concepts, you may wish to teach it during your Science period.

Science Concepts

1. People and animals need air to breathe.
2. A fire needs air to burn.
3. There is oxygen in air.

English Vocabulary (*actually developed in this lesson)

* oxygen
* live
* breathe
* burn

English Sentence Patterns (*actually developed in this lesson)

* What do _____ need to _____?
* _____ need air to _____.

Special Materials Required

Pictures of skin diver, astronaut, fireman
Candles, jar

Concept Development/Language Exposure

1. a) Have students hold their breath and pinch their nostrils closed. When they let go, ask them why they had to let go. What would happen if they couldn't breathe? Tell students that people can live for several weeks without food, several days without water but only a few minutes without air. Explain that there is something in air that all living things need to live - oxygen. Write "oxygen" on the board. Ask students if they have heard the word before. Try to visit the Nursing Station/Fire Station to view the oxygen tanks, oxygen masks, oxygen tents, etc.

   Look at the pictures of the skin diver, fireman and astronaut. What special equipment do they have to help them breathe? Why? Model the sentence pattern: "People need air to live."

   b) Discuss the ways in which animals get the air they need to breathe. (Most land animals breathe air in the same way that people do; fish get air from the water through their gills; whales have to surface and take air through their blowholes.) Model the sentence pattern: "Animals need air to live."

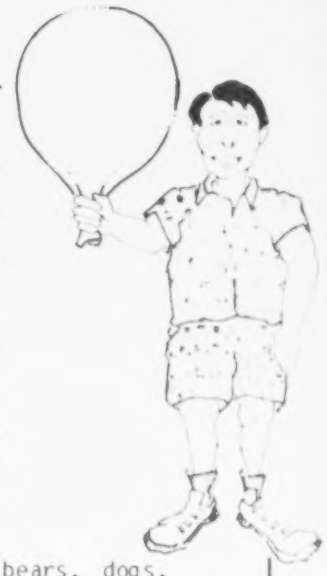
2. a) Explain that air is also important to us because it allows things to burn. Demonstrate this concept by lighting two candles, then placing a jar over one of them. What happens? Why? Model the sentence pattern: "Candles need air to burn."

   b) If people use woodstoves in your community, demonstrate how the damper controls the amount of air that reaches the fire. What happens when the fire gets lots of air? only a little air? You could also demonstrate this by having students blow on a campfire. What happens when they blow on the fire? Model the sentence pattern: "Fires need air to burn."

Language Practice

L 1. Hop the Line: Make a line on the floor with masking tape. Students stand along the line with their toes touching it. Ask students to listen for a word/phrase. Call out a series of words/phrases. When students hear the assigned word/phrase they hop over the line.

E.g., Teacher: "Hop over the line when you hear the word burn. Burn, learn, bean, burning, burn, bun, bear, burn, etc."



OR

Teacher: "Hop over the line when you hear the sentence People need air to breathe. People need water to breathe, people need air to breathe, houses need air to breathe, etc."

L 2. True or False: Make a series of statements using the sentence pattern. Students nod if a statement is true and shake their heads if it is false.

L 2. Elimination: Recite a list of vocabulary related to a specified topic, including some non-examples for the topic. Students indicate which items do not belong.

E.g., Teacher: "They need air to live: people, bears, dogs, rocks, fish, babies, boats."

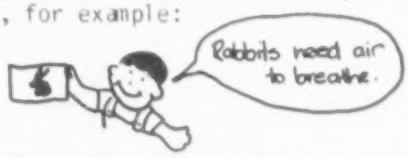
L/S 3. Categories: Stand in the centre of a circle of students holding a ball. Bounce the ball to one of the students and name a category. The student must name an example and use it in the sentence pattern before the other students count to 10.

E.g., Teacher: "They need air to breathe."
Student: "Caribou need air to breathe."

Variation: Teacher says part of a statement then rolls the ball to a student. The student completes the statement and rolls the ball back.

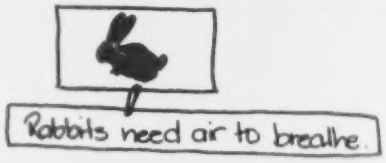
E.g., Teacher: "People need air ....."
Student: "to breathe."

S 4. a) Picture Bank: Label a bulletin board with the statement "They need air to breathe." Have students cut pictures out of magazines of things that fit this description. Have them place their pictures, in turn, on the bulletin board. As they do so, they should describe their pictures using the sentence pattern, for example:



When all pictures are mounted on the board, chant the pattern with students substituting the different items as you point to their pictures.

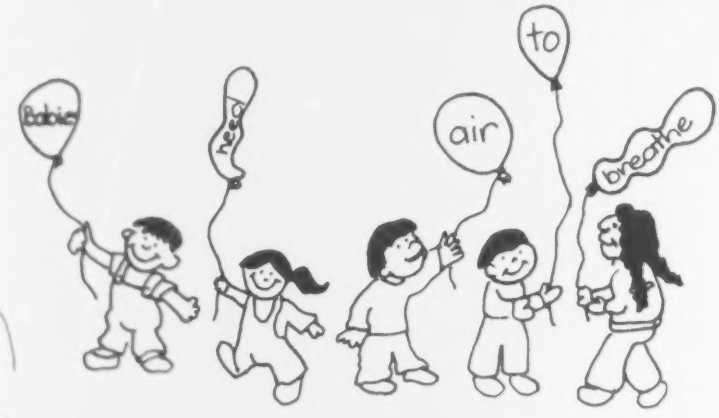
S/R b) Prepare a sentence strip to accompany each picture on the bulletin board. As you chant the pattern, attach the sentence strips to the appropriate pictures with paper clips.



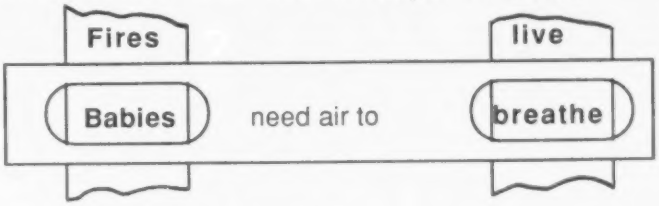
Read sentence strips with students as you point to the words. Have individual students read sentence strips as you point to them. Remove the sentence strips and distribute them to students who must replace them in the correct positions.

S/R c) Repeat the above activity using the pattern "They need air to burn."

R 5. Balloon Sentences: Choose several statements from the preceding activity. Inflate a number of yellow balloons and write one word of the first statement on each balloon. Deflate the balloons. Write the second statement in the same manner on red balloons, the third on white balloons, etc. Mix all the deflated balloons in a hat; each student chooses one. Then all students with yellow balloons stand together, all those with red ones stand together, etc. When a signal is given everyone blows up his/balloon. Each team then seats themselves on the floor so that they can read the words in the correct order.



R/W 6. Have students make tachistoscopes as shown:



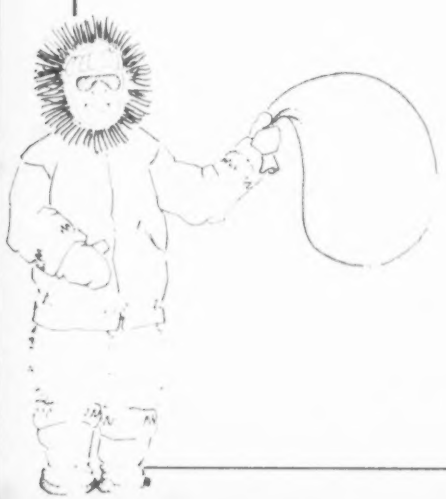
Have them copy correct statements onto a sheet of paper or the chalkboard.

Application

1. Discuss the reasons why:

   a) you should never put plastic bags over your head;
   b) you should never play in old refrigerators or freezers;
   c) you should wrap a person whose clothes are on fire in a blanket and have them roll on the ground;
   d) you should put a fire out with blankets, baking soda, a fire extinguisher, etc.

2. Write a class chart story about what might happen if there were no air.



Lesson: The Hungry Balloon (Grade One)

As this lesson emphasizes language related to a literature selection, you may wish to teach it during your Language Arts period.

Science Concept

1. Air takes up space.

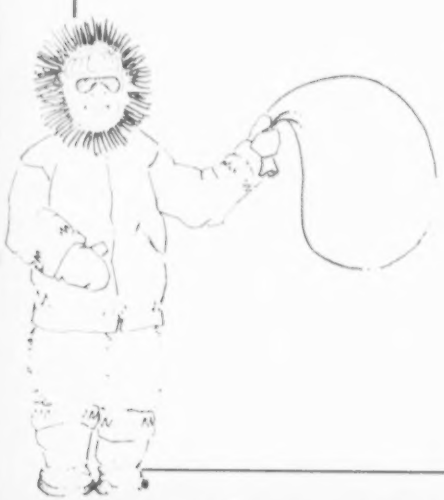
English Vocabulary (* actually developed in this lesson)

* glass of milk/water	* milk carton	* gobbled
* glasses	* banana/s	
* slice of bread	* apples	
* toaster	* oranges	
* pound of butter	* fridge	
* stove	* kitchen table	
* giant strawberry	* pincushion with silver sprinkles	

English Sentence Patterns (* actually developed in this lesson)

* But the balloon didn't eat/drink just one _____; it drank/ate all the _____. Then it gobbled up _____ and _____.

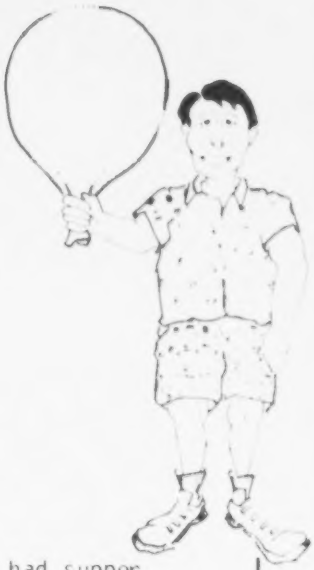
(Students will use the pattern orally; they will not be expected to read it.)



Special Materials Required

Illustrations

Strawberry pincushion (or tomato shaped)



The Hungry Balloon

Based on the original The Well-Mannered Balloon
Nancy Willard
Harcourt Brace Jovanovich, 1976
Adapted by M. Gilmour

One day when Simon and his mother were at the Bay, Simon saw a lovely red balloon over by the toys.

"Please, Mom, buy me that balloon," said Simon.

"Later," said his mother.

So, after she had paid for all her groceries, Simon's mother bought him the red balloon, and Simon carried it all the way home.

He drew a face on it and tied the balloon to his chair while he had supper. When he went to bed, he tied the balloon to the end of his bed.

As soon as Simon's mother and father had gone to bed and the house was dark and quiet, the balloon whispered loudly to Simon.

"Wake up," it said. "I'm thirsty."

So Simon climbed out of bed and got a glass of water. The balloon drank the glass of water and said, "I really wanted milk."

So Simon took the balloon to the fridge and poured it a glass of milk.

But the balloon didn't drink just one glass of milk; it drank all the milk.

Then it gobbled up the milk carton and all the glasses!

"I'm hungry," said the balloon.

"Here, have a banana," said Simon.

But the balloon didn't eat just one banana; it ate all the bananas.

Then it gobbled up the apples and all the oranges!

"Now I'm really hungry," said the balloon.

"I'll toast some bread for you," said Simon.

But the balloon didn't eat just one slice of bread; it ate all the bread.

Then it gobbled up the toaster and a pound of butter!

"Yummy," said the balloon.

"Oh, dear," said Simon.

"And now I'm really VERY hungry," said the balloon.

So it ate the fridge.

Then it ate the stove.

And then, just for fun, it ate the kitchen table!

"And now," said the balloon, "I'm going to eat you up."

"Wait," said Simon. "I'll bet you've never eaten a giant strawberry with silver sprinkles."

"No," said the balloon, "I haven't."

"Oh, there's nothing more delicious than a giant strawberry with silver sprinkles," said Simon.

"Well," said the balloon. "Then give me a giant strawberry with silver sprinkles."

So Simon got his mother's pincushion from her sewing basket and handed it to the balloon.

The balloon swallowed the pincushion in one gulp.

POP!

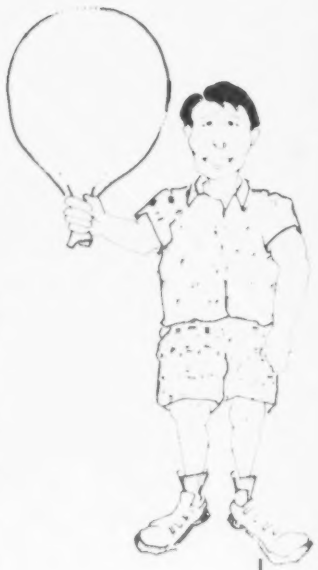
Out came the water,
the milk,
the milk carton,
the glasses,
the bananas,
the apples,
the oranges,
the bread and the butter,
the toaster,
the fridge,
the stove,
and the kitchen table.

And Simon went back to bed.

The next morning, his mother found the broken balloon.

"I'm going to the Bay today," she said. "Would you like me to bring you another balloon?"

"No thanks," said Simon.



Concept Development/Language Exposure

1. Introduce the figure of Simon and tell students the title of the story. Ask them if they have any ideas about what might happen.

   Begin to tell the story. When you mention the balloon, take a red balloon from your pocket and inflate it. At the appropriate point in the story, draw a face on the balloon with a marker. Pin pictures of the various items that the balloon eats on the clothesline as you mention them. (Try to obtain a real pincushion and use it in place of a picture.) At the appropriate point in the story, pop the balloon and remove the pictures from the clothesline in the order mentioned.

   After listening to the story, encourage the students to respond by sharing their feelings, comments and questions about it. Ask questions that will guide students to elaborate their initial responses, for example:

   What was Simon's problem with the balloon?
   How did you think Simon would solve his problem? Why did you think that?
   How did Simon actually solve his problem? Did it work?
   Why didn't Simon want another balloon?
   Do you think this story could really happen?
   Can you think of another title for this story?
   Etc.

2. Retell the story. Encourage students to chant with you, particularly the parts: "But the balloon didn't _____ just one; it _____ all the _____. Then it gobbled up the _____!"

3. Discuss the sequence of events in the story. What did the balloon ask for first? next? then? Can any of the students retell the story in their own words?

4. Have students think of words they could use to describe the balloon Make a list of these words.

   E.g. mean balloon
   scary balloon
   red balloon
   etc.

Language Practice

L 1. Which Picture?: Provide each student with a copy of the pictures of things the balloon ate. Have them colour the pictures and cut them out. As you tell the story, have students hold up appropriate pictures. Later, call out names of individual items and have students select the correct pictures and hold them up, for example:

Teacher: "But the balloon didn't eat just one slice of bread, it ate all the bread."

Students hold up pictures of slice of bread and loaf of bread.

L 2. Upset the Basket: Make two sets of pictures of things that the balloon ate. Distribute them to students. (Two students will be holding the same pictures.) Have students sit on chairs arranged in a circle. Call out a statement. The two students holding the item mentioned must trade places. Occasionally say, "Upset the basket!" Then all students must change places.

E.g., Teacher: "Then it gobbled up the milk carton."

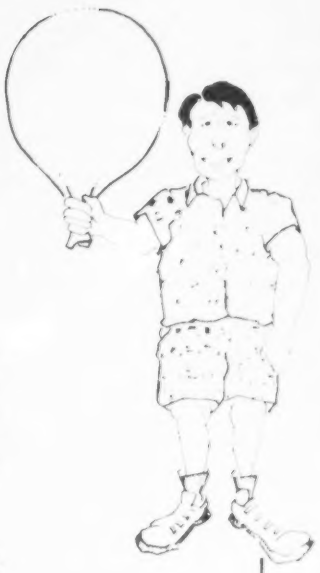
Students holding pictures of the milk carton trade places.

L/S 3. Pop the Balloon: Students sit in a circle and listen to a statement (for example: But the balloon didn't drink just one glass of milk; it drank all the milk.) which they will have to repeat. Pass a balloon around the circle as music plays. When the music stops, the student holding the balloon must repeat the statement. If s/he does so correctly, s/he may pop the balloon. Inflate another balloon and start a new round.

L/S 4. Oral Cloze: Say the sentence pattern leaving out the names of the items the balloon ate. Hold up pictures of the items. Students repeat the sentence inserting the names of the pictures displayed. For example:

Teacher: Hold up the pictures of one banana and a bunch of bananas and say, "But the balloon didn't just eat one _____; it ate _____."

Students: "But the balloon didn't eat just one banana; it ate all the bananas."

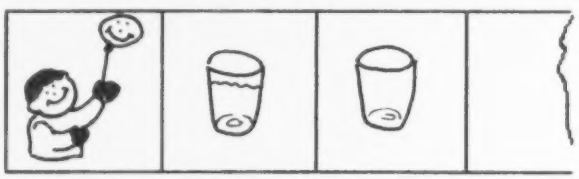


S 5. Flashlight Game: Tape pictures around the classroom. Shine a flashlight on one of them. Students call out an appropriate sentence incorporating the name of the item. For example:

Teacher: Shines flashlight on picture of fridge.

Students: "Then it gobbled up the fridge."

S 6. a) Story Strip: Develop a visual representation of the story with students. (Use a piece of mural paper and pictures from LP#1.) Have students recall the story and select appropriate pictures to paste on the strip. Your finished product should look somewhat like this:



Have students take turns telling the story using the story strip as a visual aid to remind them of the sequence of the story.

Students may also wish to make their own smaller versions of the story strip.

L/R b) Retell the story. As you mention each item, attach a card with the written word/phrase to the picture with paper clips.

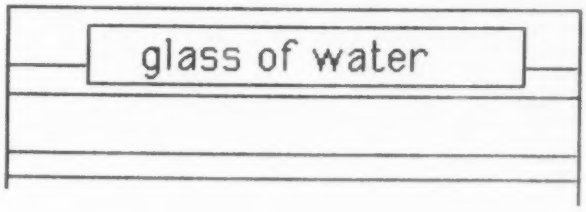
Read the word/phrase cards with students. Have them point to the ones you specify. Remove three of the cards and distribute to students. Have them match them to the correct pictures. Remove other cards and repeat the activity.

R 7. Find Your Mate: Distribute pictures to half the class, and word cards to the other half. Students attempt to find the person who is holding the mate to their picture/word. Each pair could then share their word/phrase with the rest of the class.

R 8. Balloon Toss: Write words/phrases on small slips of paper. Place slips inside balloons (one per balloon) and inflate the balloons. Toss the balloons into the air. Students catch the balloons, pop them, then read the slips inside.

L/S/R 9. Distribute word/phrase cards to students. Begin telling the story and substitute "hmmm" for the first item that the balloon eats. Students call out the appropriate item and the student holding the correct word card places it in the pocket chart, for example:

Teacher: "...The balloon drank the hmmmm and said...
Students: Glass of water."



W 10. Signt Word Activities: Provide a variety of media which students may use to practice writing the words.

E.g., Fingerpaint
Paint with water on chalkboard
Glue yarn on paper
Cut individual letters from magazines; glue on paper
Etc.

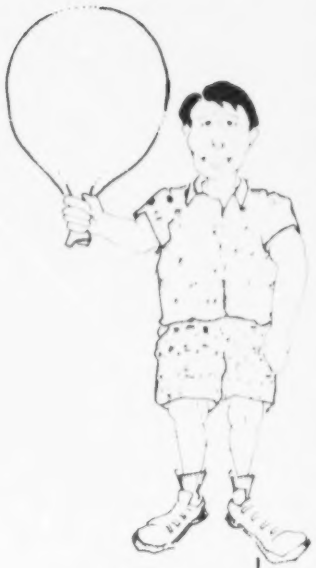
Application

1. Brainstorm other possible endings with the class. Rewrite the story using one of these new endings.

2. Have each student draw a face on a balloon and give it a name. Have them use the story frame to write a new story about their balloon.

3. Compose a class letter to Simon asking him:

   a) how he felt when the balloon started talking;
   b) where he got the idea to feed a pincushion to the balloon.



4. Students pretend to be balloons like the one in the story. What things would they ask for? Record ideas on a chart. Categorize them.

5. Make pincushions like the one in the story.

6. Have each student draw a face on a balloon.

CULMINATING ACTIVITIES - GRADE ONE

1. Theme Notebooks - Have students design their own covers for their Air Notebooks. These notebooks could include their favourite poems, songs or chants, pictures, small craft projects, worksheets, stories and poems that they have written, etc. that are related to the AIR theme. It is important for students to choose what they will put in their notebooks. The notebooks are their personal "souvenirs" which they may take home to share with family and friends.

2. Have students design posters advertising "AIR, WONDERFUL AIR."

3. Make a list of compound words that contain the word "air."

   airplane
   airstrip
   airport
   air raid
   airspace
   airspeed
   airmail
   air force
   etc.

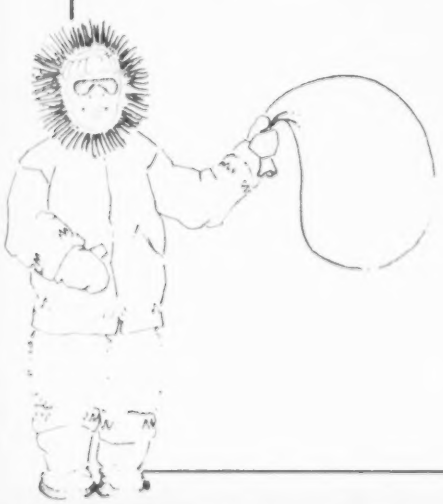
   Discuss the meaning of each word.

4. Provide a small group of students with a bag full of air and a bag full of water. Ask students to describe each of the substances. They may record their ideas on paper or on tape. Compare the two substances: How are they similar? different?

5. Write similes about air. Brainstorm ideas with students. For example:

   Teacher: "Is air heavy or light?"
   Students: "Air is light."
   Teacher: "What else is as light as air?"

   Students brainstorm and teacher records ideas. These items are then used in the frame sentence, "A feather is as light as air."



6. Plan a Balloon Day:

   Have students write notes inviting their parents to attend.

Have students send off balloons (filled with helium if possible) containing notes asking the finders to write and tell where the balloons were found.

Fasten a bunch of balloons to the bulletin board. Have a message about air inside each balloon. Students take turns popping the balloons and reading the messages inside.

Have students deliver balloon bouquets to people in the community (elders, ill people, etc.).

Make round cakes and cookies and decorate them to look like hot air balloons.

Have students present songs, poems, stories about balloons.

Have a balloon blowing contest.

Display all the things that students produced during the unit.

EVALUATION ACTIVITIES - GRADE ONE

It is important to assess what your students have learned during this unit. The following activities evaluate language and concepts.

You can do them orally (in small groups or with individuals) to test listening and speaking or on paper to test reading and writing. These are only suggestions; you can substitute different content or vocabulary items to make them more appropriate for your students. You probably will want to include many other activities as well.

1. Tell or give the students four or five words or phrases. Have them indicate which do not belong.

   Things that need air:
   People need air to live.
   Fish need air to live.
   Trees need air to live.
   Rocks need air to live.
   Whales need air to live.

2. Tell or give the students sentence beginnings to match to sentence endings.

When you put air into a tire	it gets flat.
When you take air out of a tire	it bulges.
When you put air into a balloon	it gets bigger.
When you take air out of a balloon	it gets thin.

3. Tell or give the students the beginning of a sentence and a number of possible sentence endings. They indicate which sentence endings are appropriate for the sentence beginning.

You can	smell air.
	feel air.
	hear air.
	taste air.
	see air.
A balloon full of air	is lighter than an empty balloon.
	is heavier than an empty balloon.
	weighs the same as an empty balloon.

INITIAL ASSESSMENT ACTIVITIES - GRADE TWO

The following activities should be done before you teach any of the lessons. They will assist you to determine:

1. what students already know about the concepts of the topic and therefore where instruction should begin;

2. what interests students have in the topic and therefore the direction the unit should take; and

3. what language students already have to discuss the topic and what language they require.

One of the basic principles of the Language Development Approach and of all good teaching is that you should start with the student when planning and carrying out a unit. Before you begin to teach it is important to assess your students' knowledge of and interest in the topic. You should determine what students already know about the topic/concepts you intend to cover. What ideas do students already have? What misconceptions do they have which you must address? What gaps are there in their knowledge which require that you teach certain lessons? What concepts do they know well enough so that you can skip the lessons which teach those concepts? What questions do they have? What relationships do they see between different aspects of the topic?

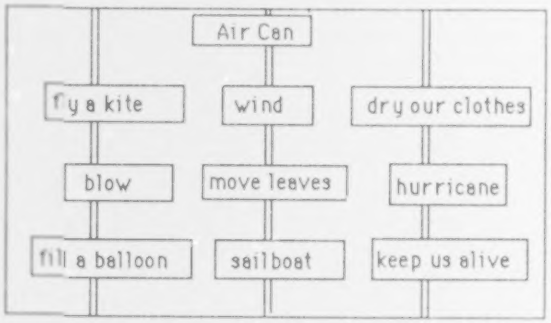
It is also important to identify what experiences students have which relate to the topic/concepts. By identifying these and building upon them in the lessons you can help students relate the new ideas and information to their own lives. It is important to do this because it assists students to internalize new concepts. It helps students make the concepts part of the conceptual framework which they use to understand and describe their world. If they do not have concrete, firsthand experiences to relate to each concept you will have to provide them wherever possible.

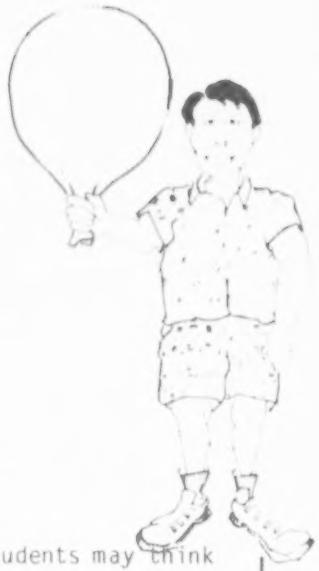
Another use for these activities is to help you identify particular interests of individuals, groups of students, or the whole class. You can then include activities in the lessons which involve student interests, thereby increasing motivation for them to participate and learn. You may decide to add, substitute or omit some lessons because of students' interests.

These activities will also help you determine what language students have to discuss the topic. You can find out what vocabulary items students already know and what associations they have for each word. It is important to ascertain the meanings students attach to words; sometimes their interpretations may surprise you! If they do not clearly understand terms or use them incorrectly, it will prevent them from understanding and incorporating the concept into their mental framework.

1. Brainstorming

Look at pictures of windmills, airplanes, clothes on a line, etc. Ask students to tell you what they know about what air can do. Record their answers on cards and hang them on masking tape strips (sticky surface up) which you fasten to the wall or the chalkboard.





If students have difficulty with this activity you may wish to direct their thinking or prompt ideas by asking more specific questions:

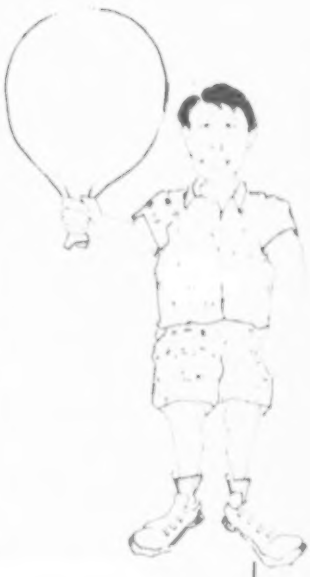
"What happens when air pushes on things?
Can you think of any machines that need air to work?"
Etc.

Encourage students to predict answers to these questions even if they aren't sure of the exact responses. It might be interesting to record their predictions separately and compare them to the actual answers as you study the unit. Students may think of their own questions as well. Keep a list of all the questions the class cannot answer to focus the lessons you teach during the unit.

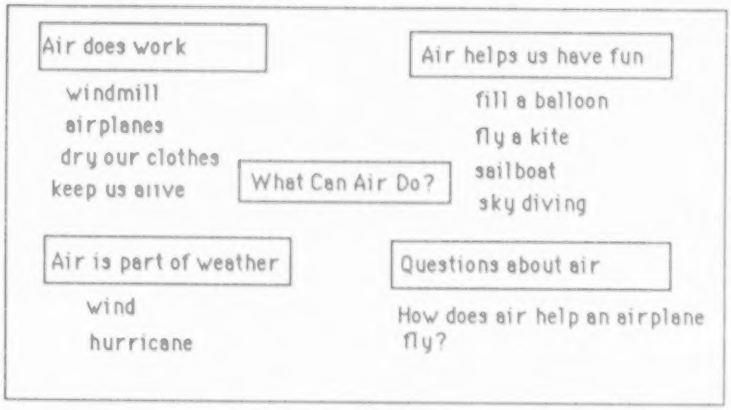
After you record their responses on the cards, have students chant the words with you. Talk about the words: Which word is the most interesting? the least interesting? the most puzzling? What other word can you think of that means almost the same thing? What comes to your mind when I say _____? What do you think this word means? Etc.

2. Categorizing:

Distribute the word cards from the brainstorming session. Be sure to tell students the words you give them. Give younger students only one card at a time so they will not get confused. Have one student place his/her word card at the top of one of the masking tape strips and tell the word to the class. Ask if there is anyone else who has a word that belongs with the first word. Have another student place his/her word card under the first, read the word and explain why it belongs with the first word. Give a title to these two cards which now form a category. Ask if anyone can start a new category. When students have placed all of the brainstormed words in categories, discuss the titles and change them if necessary. Chant the words in each



category with students. Transfer the words to a flowchart to provide a permanent reference.



As you teach the unit you may wish to add new information to the chart. You may also identify new questions and, hopefully, the answers. At the end of the unit you can review the chart with students. Keep it as a reference for future use.

SAMPLE QUESTIONS

You can use these questions during the initial assessment activity to determine what experiences, language, and knowledge students have about the topic. You can also use the questions for assessing thinking processes throughout the concept development and application phases of each lesson and during the culminating and evaluation activities.

QUESTIONS FOR ASSESSING EXPERIENCE:

1. Have you been in a situation where _____?
2. What do you know about _____?
3. Have you ever seen _____?
4. Have you ever experienced _____?
5. Have you ever been _____?
6. Have you ever done _____?
7. Has something like this ever happened to you?
8. When was the last time you _____?

QUESTIONS FOR ASSESSING LANGUAGE:

1. What do you think these words mean?
2. Can you give me another word that means _____?
3. What comes to your mind when I say _____?
4. Have you heard of the word(s) _____?
5. What words can you think of when I say the word _____?

QUESTIONS FOR ASSESSING THINKING PROCESSES:

Cognitive Memory (details, information)

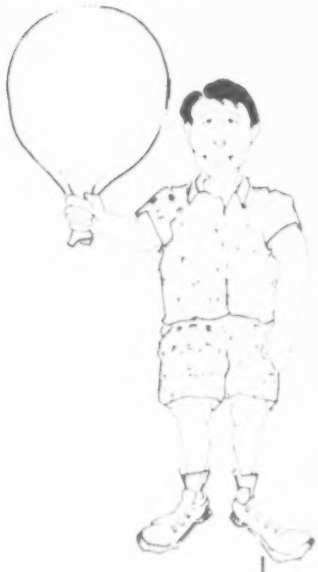
1. Who.....?
2. What are the facts?
3. What are the most important details?
4. What is the.....?
5. What do you mean by.....?
6. What is your interpretation of what happened? (What do you think happened?)
7. When?
8. Where?

Convergent/Generalizing (getting the main idea)

1. What are the chief points?
2. Given that information, what is the main idea?
3. What is the single most important idea?
4. State the idea in one sentence.
5. Explain _____.

Structuring/Relating (arranging relationships)

1. Categories: Which group does that belong to?
   How would you classify.....?
   What type would you.....?
2. Comparisons: How are they alike? same? similar? identical?
3. Contrast: How is it different? in opposition to? unlike?
4. Cause and Effect: What will happen if? Why?
   What will happen as a result of?



Divergent/Using/Applying

1. What might happen if _____?
2. If you use that idea, what would it mean for _____?
3. Apply that idea to our (this) situation.
4. What would result if _____?
5. If you were given these facts, what would you do to _____?
6. How would it be different if we used this idea?
7. What could the advantages/benefits be if we applied this idea/process?
8. What do you think the (story/paragraph) will be about?

Evaluation/Judging/Valuing

1. How do you feel about this idea?
2. What is your opinion?
3. What is the best _____?
4. Are you satisfied with that answer/plan?
5. Can this statement be made? Why?
6. Out of all the information, what can be used to prove your point?
7. How would you judge?
8. What is your opinion or conclusion about the product/plan/idea?
9. Why did you think it worked/didn't work?
10. What is fact? What is opinion?

Science/Social Studies

1. Make a list of things that are fun to do outside on a windy day.
2. Make a list of things that are difficult to do outside on a windy day.
3. How many "wind words" can you think of? (breeze, gale, tornado, typhoon, hurricane, chinook, trade wind, etc.) Have groups of students research each term and present their findings to the class. Use the information gathered to make a bulletin board about the wind. (You may need to have an older student work with your students to do this.)
4. Fill a drinking glass with water. Put an index card over the top of the glass. Hold the card in place and turn the glass upside down. Take your hand away from the card. The water will not fall out. That's because air presses against things very hard.
5. Try to hear all the different sounds the wind makes. Listen to the way it sounds as it blows through trees or past buildings. Try to imitate the sounds. Try to tape them.

Teacher's Notes

These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

Special Activities

1. Construct sailboats using corks, thumbtacks, toothpicks and paper. Hold sailboat races. Try different ways of making the boats move: pushing the water, blowing on the boat, blowing through drinking straws, using an electric fan, etc.

ACTIVITY IDEAS

TOPIC B: AIR EXERTS PRESSURE

Science/Social Studies con't

6. Have a friend stand about 100 feet away from you facing into the wind. Shout to him/her. Can s/he hear you? Now have him/her shout back to you. Which way can you hear farther - with the wind or against the wind?
7. Make a list of things that air can move. (E.g., papers, leaves, doors, etc.) Make a list of things that air usually does not move. (E.g., cars, houses, etc.) What kind of moving air can move these things? (Tornadoes, hurricanes, etc.)

Math

1. Measure the wind speed every day for a period of time (or get information from local weather station). Make a graph showing the wind speed.

Language Arts

1. Brainstorm words to complete these statements:
   I can see the wind when _____. I can feel the wind when _____.
   I can hear the wind when _____.
   OR I know it is a windy day when I can see _____.
   I know it is a windy day when I can hear _____.
   I know it is a windy day when I can feel _____.
2. Who would like a windy day? Who wouldn't like a windy day? Remember a very windy day and write about what happened to these characters.
3. Brainstorm a list of words that describe the wind. Use them in this frame sentence: "The wind is _____." Arrange sentences to make a poem.
4. Pretend you are kites flying about on a windy day. Write about how you feel. Make a kite shaped book.
5. Brainstorm endings for this sentence beginning:
   If I were the wind I would _____.
6. Play "I Spy" - I spy with my little eye something that the wind could (couldn't) blow.

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Music, Poems, Stories

1. "Who Has Seen the Wind"
2. "The Night Wind"
3. "Saturday Wind"
4. "Wind"
5. "Wind Song"
6. "Brooms"
7. "Clouds"
8. "Wind"
9. "Old March Wind"
10. "I Like the March Wind"
11. "Crick! Crack! Wind at My Back"
12. "The Wind"
13. "The Sound of the Wind"
14. "Windy World"
15. "The Wind"
16. "Wind"
17. "March Wind"
18. "The March Wind"
19. "March Wind"
20. "Wind"
21. "Autumn Leaves"

Art

1. Make mini parachutes using squares of cloth or plastic, thread, and a thread spool or cork. Crumple the parachutes up and throw them in the air. Why do they come down slowly? Did some come down faster than others? Why?
2. Have groups of students work on constructing kites. Refer to books for ideas about designs. Hold a kite day.
3. Make wind chimes using a variety of materials: nails or spikes; driftwood; copper piping; seashells; old keys; etc.
4. Make blown paint designs: Put a straw into paint. Put finger tightly over the top of the straw as you move the straw onto the paper. Blow through the straw to create designs. What happens if you blow gently? harder?
5. Decorate a piece of 8 x 11 paper. Pleat it and staple at one end to make a fan.
6. Make pictures of clothes on a clothesline, a flag on a pole, smoke coming out of a chimney, etc. using real materials (fabric scraps, wire, cotton batting, etc.).

Physical Education/Movement

1. Pretend that you are: a leaf falling from a tree; smoke coming out of a chimney; a blade of grass blowing in the wind; clothes hanging on a line; dirt blowing in a dust storm; etc.
2. One student pretends to be a windmill and makes his/her arms go round. When s/he stops, s/he asks the others, "How many times did the windmill turn?" The student who guesses correctly is the next windmill.
3. Parachute Activities: (Parachutes may be ordered from most educational supply catalogues.)
   a) The Umbrella - Starting with arms down, all lift the chute overhead simultaneously. Take one or two steps into the middle to allow the chute to billow up.
   b) The Mountain - Start with the umbrella, then pull the chute down and hold the edge to the floor. Students kneel on the edge and feel the chute shake.

Physical Education/Movement con't

   c) The Marshmallow - Start with the umbrella, but this time students take three or four large steps toward the middle. Then, repeat procedure for the mountain.
   d) Inside the Mountain - Start with the marshmallow. Students reverse their positions when the chute is at peak so that they are inside when the chute is pulled down.
   e) Pass Under - Start with the umbrella. Two students on opposite sides change places under the umbrella. Repeat until all students have had had a turn.

Lesson: Air Can Make Things Move (Grade Two)

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

Science Concepts

1. Air can do work - it can push things.
   - it can make things spin.
   - it can make things move.

English Vocabulary (*actually developed in this lesson)

* smoke	* move
* trees	* spin
* flags	* turn
* balloons	* flutter
* streamers	* tremble
* paper	* sway
* etc.	* etc.

English Sentence Patterns (*actually developed in this lesson)

* Tell me, tell me
  What can air do?
  Air can make _____ move/spin/turn/etc.
  _____.

(Note: The poem will be used only in L and S activities. The patterns "What can air do?" and "Air can make _____." will be used in L, S, R and W activities.)

Special Materials Required

Streamers
Materials to construct pinwheels
Materials to construct sailboats
Balloons
Pictures of things that move in the wind

Concept Development/Language Exposure

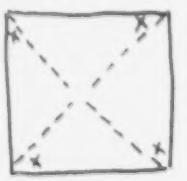
1. Choose a day when you can see some evidence that the wind is blowing. Before going outside talk to students about the wind: "How do you know when the wind is blowing? Can you see the wind? Can you see what the wind does?" Have students look for signs of wind while they are outside. Record their observations. When you return to the classroom discuss what wind is (moving air). Have students describe the movements made by the various things (e.g., flutter, sway, swirl, etc.). Model the sentence pattern using students' observations, for example:

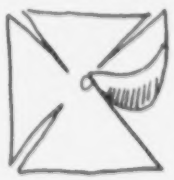
   "Air can make flags flutter."

   Have students pretend to be flags fluttering in the wind. Repeat with other vocabulary.

2. Have students decorate strips of paper with paint, felt pens or crayons. Take the streamers outside. Encourage students to observe what happens to the streamers when the wind blows or as they run. Tape some of the streamers to playground equipment and observe them in the wind. Discuss students' observations: "What happens to the streamers when you stand still? What happens when you walk or run? What does the streamer look like when the wind blows it? Etc. Model the sentence pattern: "Air can make streamers swirl."

3. a) Have students make paper pinwheels:

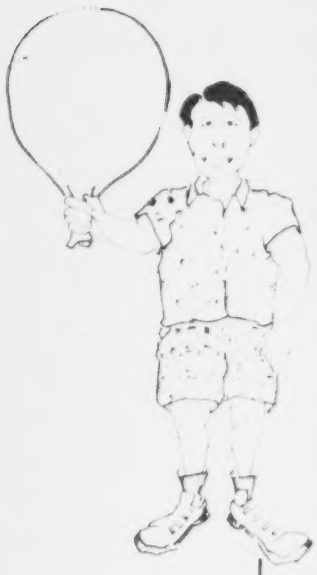




   b) Take the pinwheels outdoors on a windy day. What happens to them? Have students hold their pinwheels in a spot sheltered from the wind. What happens? Why? Model the sentence pattern: "Air can make pinwheels spin."

   c) Have students inflate balloons. Ask "What is inside the balloons?" (Air.) Have students hold their pinwheels in front of their balloons and let the air out. Model the sentence pattern, "Air can make pinwheels turn just for you."

   d) Look at pictures of windmills. Discuss how they work and what they are used for.



4. Have students make small sailboats (using corks, toothpicks, paper) Place sailboats in a shallow basin of water. Have sailboat races using different methods of making the boats move (letting air out of a balloon, blowing, waving a paper fan, etc.) Model the sentence pattern, "Air can make sailboats go on the water blue."

5. Have students cut out pictures from magazines of things being moved by the wind. Use the pictures with a puppet to model the sentence patterns, for example:

   Teacher: "Tell me, tell me, what can air do?"
   Puppet: "Air can make windmills turn, its true, its true." (Holds up picture of windmill.)

6. Recite the poem. Place pictures in a pocket chart as you describe them.

Language Practice

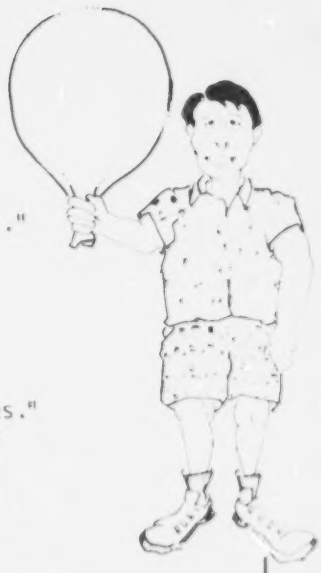
L 1. Flashlight Game: Place pictures of things discussed in CD#1 around the room. Call out a statement about one of the pictures. One student shines a flashlight on the appropriate picture.

   E.g., Teacher: "Air can make trees sway."
   Student shines flashlight on picture of trees.

L/S 2. Oral Cloze: Leave the illustrations from LP#1 on the walls. Teacher makes statements omitting the names of objects moved by air. Students provide these.

   E.g. Teacher: Shines flasnlight on picture of kites and says, "Air can make ____ fly."

   Students provide word "kites."



L/S 3. Substitution Drill: Begin by making a statement. Then provide a word for students to substitute in the same phrase.

E.g., Teacher: "Air can make sailboats move. Leaves."
Students: "Air can make leaves move."

After some group practice, individual students could respond and provide words for other students to substitute.

E.g. Teacher: "Air can make sailboats move. Leaves."
1st Student: "Air can make leaves move. Clouds."
2nd Student: "Air can make clouds move. Water."

Repeat this activity substituting verbs, for example:

Teacher: "Air can make trees move. Sway."
1st Student: "Air can make trees sway. Flutter."
2nd Student: "Air can make trees flutter. Swish."
Etc.

L/S 4. Cumulative Chain Drill: Sit in a circle with a small group of students. Make a statement. First student must repeat teacher's statement and add another item. Continue around the circle until all students have added an item or until nobody can think of a new item.

E.g. Teacher: "Air can make sailboats move."
1st Student: "Air can make sailboats and leaves move."
2nd Student: "Air can make sailboats, leaves and water move."

To make this activity more difficult, have students think of items in alphabetical order.

E.g. Teacher: "Air can make ashes move."
1st Student: "Air can make ashes and bushes move."
2nd Student: "Air can make asnes, bushes and clouds move."
Etc.

L/S 5. Choral Speaking: Have students ask the question. Respond and hold up appropriate pictures.

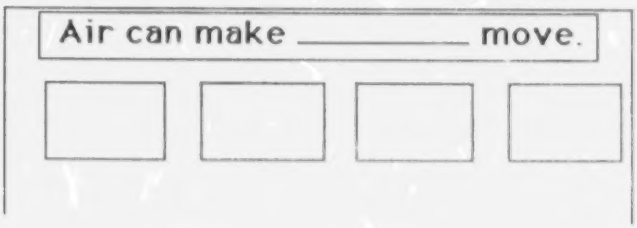
E.g., Students: "Tell me, tell me, what can air do?"

Teacher: "Air can make sailboats go on the water blue."

After some practice, divide the class into two groups. The first group will ask the question, the other will choose a picture and respond by making a statement about it. Repeat this with pairs of students.

S 6. Favourite Words: Each student selects a favourite word that describes what wind can do. At a signal, each student begins to chant his/her word in his/her own way (e.g., fast, slow, loudly, in a whisper, etc.)

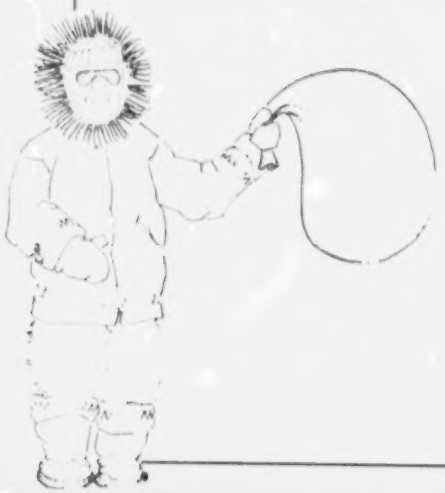
S 7. a) Picture Bank: Fill a bulletin board with pictures of things that move in the wind. (Students may cut pictures from magazines or draw their own.) Write the sentence pattern on a sentence strip and place it above the pictures. Chant the pattern, "Air can make _____ move," substituting different items as you point to their pictures.

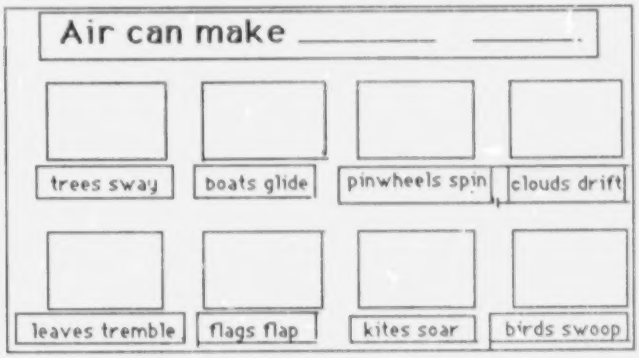


S/R b) Discuss the ways in which certain things move, for example:

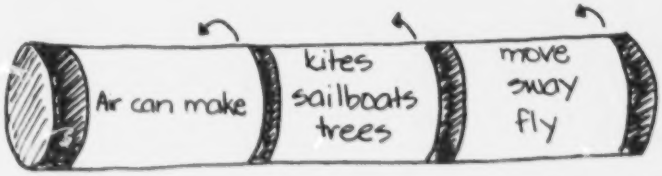
What words can you think of that describe the way trees move in the wind? Sway, swish, shake, flutter, etc.

Have students decide which words from the brainstormed lists best describe the movement of each object depicted. Write these on cards with the objects' names and attach them to the pictures with paper clips. Chant the pattern using the descriptive verbs in place of "move."



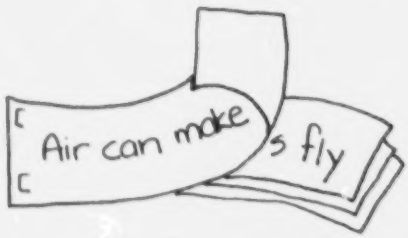


R/W 8. Sentence Roll: Take a cardboard tube and wrap a sheet of paper around it; mark off the circumference. Write the words in columns which will go to make up the parts of sentences. Cut the columns into strips; wrap these around the tube and join the ends with tape. They should revolve easily.



Have students copy true sentences onto a separate sheet of paper.

W 9. Books: Make sentence strip books entitled, "What can air do?"



Application

1. Brainstorm verses for the poem, "Tell Me." Make a big book which students may illustrate.

   E.g., Tell me, tell me
   What can air do?
   Air can make a pinwheel spin
   Just for you.

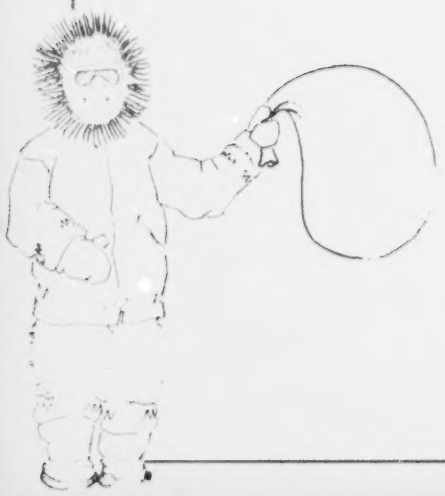
2. Make a mural of things that move in the air. Brainstorm words to describe the way each thing moves. Choose one word that best describes it. Make labels for the mural using these words.

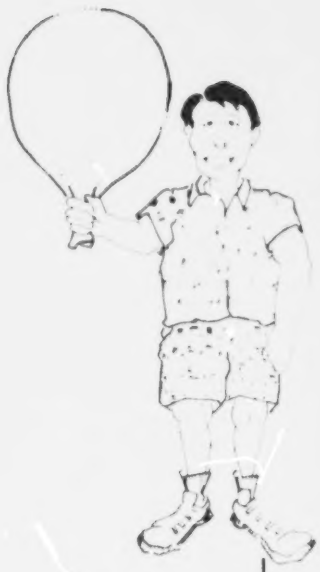
3. Balloon Relay Race: Divide class into two teams. The first player on each team inflates a balloon, ties it off and blows it across the floor to the other side of the room. S/He then picks it up, runs to his/her team and hands it to the next player.

4. Have some students make wind anemometers and weather vanes.

Weather Vane: Cut a slit about an inch long in each end of a cardboard tube. Cut an arrowhead and a tail fin out of stiff paper or cardboard. Slide each of these into one of the slits. Cut a piece of coathanger wire about 6 inches long. Wrap lots of tape around the wire about 2 inches from one end. Poke that end of the wire through the middle of the tube. Stick the weather vane into the ground. The arrow will point in the direction the wind is blowing.

Wind Anemometer: Cut two pieces of stiff cardboard 12 inches long and 1 inch wide. Cross the strips in the middle and glue them together. Staple a paper cup to each of the four ends. Cut a straight piece of clothes hanger wire about 8 inches long. Wrap lots of tape around the wire about 2 inches from one end. Stick this end through the centre of the cardboard cross. Stick the wire straight into the ground. The cupswill spin in the wind. The stronger the wind, the faster the cups spin.





Lesson: Air Can Hold Things Up (Grade Two)

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

Science Concepts

1. Air can hold things up.

English Vocabulary (*actually developed in this lesson)

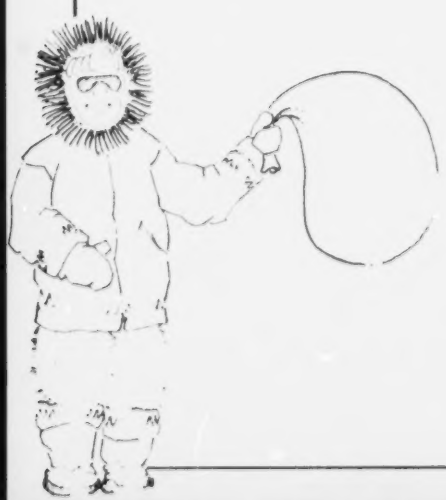
* names of familiar objects

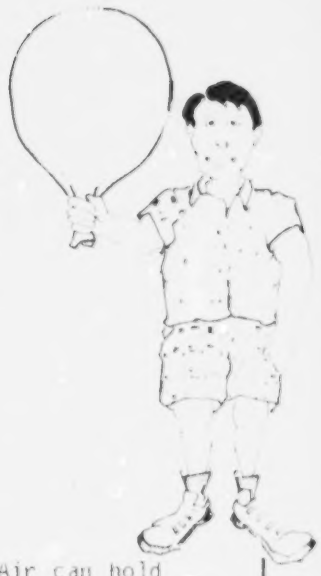
English Sentence Patterns (*actually developed in this lesson)

* What can air do?
* Air can hold a _____ up.

Special Materials Required

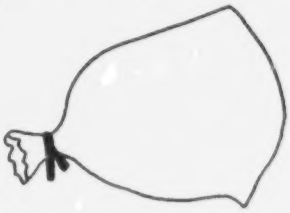
Plastic garbage bags (small and large)
Bicycle pump, tire, inflatable ball
Inflatable objects
Pictures of inflatable objects





Concept Development/Language Exposure

1. Give students a plastic garbage bag. Have them fill the bags with air and tie them off. Have them test various objects to see which can be held up by the bags. (Warn them that pointed or sharp objects may puncture the bags.) Collect the things that the bags supported on a table. Have students try to put enough air in the bags to support their own weight.



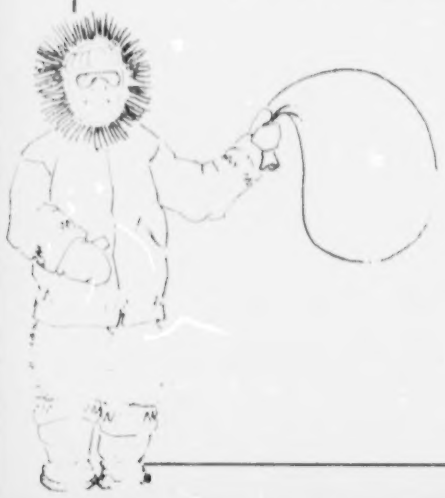
Hold up items collected and model the sentence pattern, "Air can hold up _____."

2. Point to one of the tables in the classroom and ask students if they think that air could hold it up. How could you find out?

Have about twelve students stand around a table (not the one to be lifted). Give them each a plastic bag (small white "kitchen catchers") to spread on the table with the ends hanging over the edge. Have other students place another table upsidedown on top of the bags on the first table. Now have the twelve students blow air into the bags at the same time. What happens to the table? Have a student sit on top of the table and try the experiment again. What happens? Model the sentence pattern.

Brainstorm with students what things could be held up if you had tables large enough for everyone in the school to have a bag to blow into. Do you think you could hold up a whale? an elephant? etc.

3. Use a bicycle pump to inflate a tire. Be sure to reinforce the idea that air is going into the tire. What is the tire used for? Model the sentence pattern, "Air can hold up a bicycle." What other things do we fill with air so that they support themselves or other objects? Make a collection of inflatable objects (or pictures of inflatable objects).



Language Practice

L 1. Simon Says: Call out statements. If the words "Simon says" precede the statement, students clap their hands. If they do not, students remain quiet.

E.g., Teacher: "Simon says air can hold up cars."
Students clap.
Teacher: "Air can hold up cars." Students remain quiet.

L 2. Find the Picture: Students stand in a circle holding hands. One student stands outside the circle. Place picture cards on the floor in the centre of the circle. Make a statement. The student standing outside the circle tries to enter the circle to get the picture card, while the other students try to prevent him/her from doing so by raising and lowering their arms. When the student does reach the centre, s/he must locate the correct picture. Repeat until all students have had a turn.

E.g., Teacher: "Air can hold up a truck."
Student locates picture of truck.

L/S 3. Bean Bag Toss: Place pictures on the floor. Make a statement. Student attempts to toss a bean bag onto the picture named and repeats the statement.

L/S 4. Twenty Questions: Student chooses an object which the rest of the class must identify through Yes/No questions. They may ask only twenty questions. When students make a guess they must use the sentence pattern.

E.g. Guesser: "Is it big?"
Student: "Yes."
Guesser: "Is it alive?"
Student: "No."
Etc.
Guesser: "Air can hold up a table."

S/R 5. Sentence Strips: Have students dictate statements about things that air can hold up. Record the statements on sentence strips. Read the strips with students. Have them match pictures to the appropriate strips. Have individuals read strips. Cut strips into words/phrases and have students rebuild the sentences.

R/W 6. Vanishing Drill: Provide each student with a worksheet such as the example shown below.

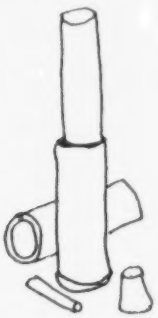
Air can hold up a _____.
_____ can hold up a _____.
_____ can _____ up a _____.

Complete the vanishing drill using an overhead projector with students before having them work on it individually. Students may wish to illustrate their statements when they have completed the worksheet.

Application

1. Divide class into small groups. Give each group an "empty" tin can and a balloon. Ask them to devise a way to lift the can up in the air. (Hold balloon inside the can. Inflate it until it fills the can. Hold the neck of the balloon tightly closed and lift the can.)

2. If possible, visit the local garage to see how air is used to hold cars up. Make a model of a hoist: Near one end of a cardboard mailing tube, cut a hole so that a cork will fit in tightly. Put the cork in place. Make a hole through the cork just big enough for a straw. Put a toy car on top. Blow through the straw. What happens?



Lesson: Air Can Slow Things Down (Grade Two)

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

Science Concepts

1. Air can slow down moving objects.

English Vocabulary (*actually developed in this lesson)

* parachute
* racing car
* falling leaf

English Sentence Patterns (*actually developed in this lesson)

* What can air do?
* Air can slow _____ down.

Special Materials Required

Pictures of vocabulary items
Materials to make mini-parachutes

Concept Development/Language Exposure

1. Hold up a square of thin plywood. Tell students that you are going to drop it on the floor. Ask them to predict the kind of noise it will make. They will probably say "Crash!," "Bang!," etc. Drop the plywood. It should make a "whoosh" sound. Ask students to speculate as to why it did not make the sound that they predicted. (Air slowed it down.) Model the sentence patterns.

2. a) Give each student two pieces of paper. Have them hold one piece vertically and the other horizontally. Ask them which paper will hit the floor last if they drop them both at the same time. Have them drop the papers. What happened? Why did the horizontal paper hit the floor last? (There is more surface area on which the air can press and slow down the paper.) Model the sentence patterns.

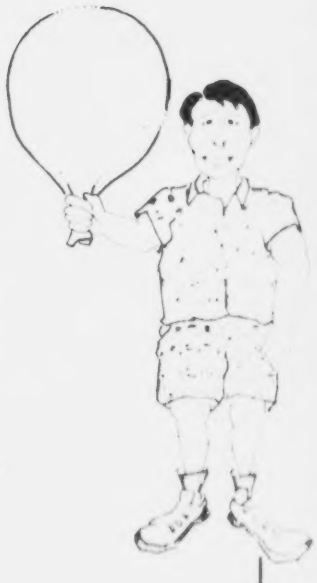
   b) Give each student two pieces of paper. Have them crumple one up and leave the other flat. Ask them which paper will hit the floor last if they drop them both at the same time. Have them drop the papers. What happened? Why did the flat paper hit the floor last? Model the sentence patterns.

3. Take students out on the playground. Have them run a given distance. Now, give them each a large sheet of cardboard to carry in front of them as they run. What happens? (It's harder to run.) Why? Model the sentence patterns. Is there a way that they could carry the cardboard to make it easier to run?

4. Make parachutes using a square of fabric, some light string and a wooden spool. Sew a piece of string to each corner of the fabric. Hold the parachute by the strings and knot them together about 7" from the corners. Tie the spool to the ends of the strings. Give each student another spool. Ask them to hold both spools above their heads. Which spool will reach the floor last if they drop them both at the same time? Why? Model the sentence patterns. Experiment with different sizes of parachutes - does a larger parachute take longer to reach the floor?

5. Talk about experiences students have had with wind slowing things down (e.g., paddling a boat against the wind, running against the wind, etc.). Find pictures of things that represent this concept - parachutes, racing cars that use parachutes, leaves falling from trees, etc. Model the sentence pattern as you hold up various pictures.

   E.g., "Air can slow a parachute down."



Language Practice

L 1. Key Phrase: Have students listen for the pattern: "Air can slow things down." Whenever they hear it they should stand up.

L 2. Vocabulary Relay: Divide class into two teams. Place the set of pictures (from CD#5) at the front of the room. Call out the sentence pattern naming one of the pictures from the set. The first member of each team races to find the picture.

E.g., Teacher: "Air can slow down falling leaves."
Students race to find picture of falling leaves.

You can make this into a speaking activity by asking students to repeat the sentence after they locate the picture.

L/S 3. Chain Drill: Seat students in a circle. Distribute one picture to each. Teacher begins by asking a question of the first student:

Teacher: "What can air do?"

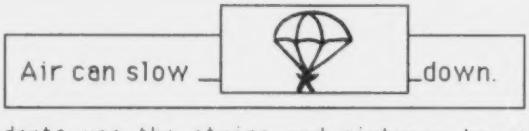
That student holds up his/her picture and responds, then asks the next student the question:

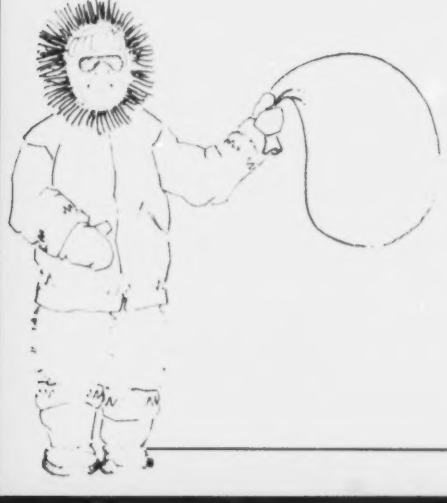
Student: Holds up picture of racing car and says, "Air can slow a racing car down. What can air do?"

R 4. Make Sentence Strips:

Air can slow _____ down.

Place one of the pictures in the space and read the sentence to students.

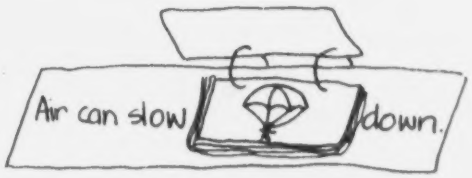




Have students use the strips and pictures to make up sentences and read them to other students. Match word cards to the pictures. Read completed sentences.

R 5. Find Your Mate: Distribute pictures to some students and sentence strips to others. Students attempt to find the person who is holding the mate to their picture/sentence.

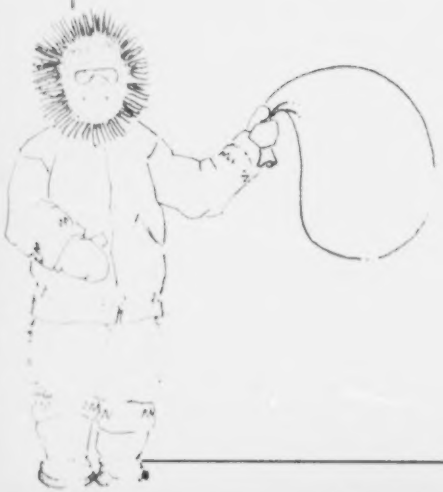
R/W 6. Flip Books:



Application

1. Talk about what might happen if air did not slow things down. Write a class story using this idea. Brainstorm story elements using a story grid:

Beginning	Setting	Characters	Actions/ Problems	Ending



Lesson: Go Wind (Grade Two)

As this lesson emphasizes language related to a poem, you may wish to teach it during your Language Arts period.

Science Concepts:

1. Air can move things.

English Vocabulary (*actually developed in this lesson)

* blow	* shake things	* ring things
* push	* take things	* swing things
* swoosh	* make things fly	* fling things high

English Sentence Patterns (*actually developed in this lesson)

Special Materials Required

Individual shape books

Go Wind
Author Unknown

Go wind, blow.

Push wind, swoosh.

Shake things

take things

make things

fly.

Ring things

swing things

fling things

high.

Go wind, blow.

Push things - wheee.

No, wind, no.

Not me -

not me!

Concept Development/Language Exposure

1. a) Brainstorm a list of words that describe things that the wind can do. Your list may look something like this:

   What the wind can do?

   lift things
   hold things up
   push things
   blow things
   move things
   make things spin
   make things turn
   etc.

   b) Tell students that you are going to recite a poem that tells about what the wind can do. Ask them to close their eyes and try to picture the poem in their minds. Recite the poem. Discuss the images that students formed while listening to the poem. Have them draw pictures of those images.

   c) Ask students to listen carefully for words that describe what the wind can do as you recite the poem again. Record as many words as they can remember. Discuss each word on the list, for example:

   "shake things" - How can the wind shake things?
   What things does it shake?
   Pretend to be the wind shaking things.
   Etc.

   d) Recite the poem again. Ask students if there are any other words that describe what the wind can do that are not on the list made in the previous activity. If students do remember additional words, go through the same activity with each word as in activity #1c). If some words are still omitted, introduce these and explain their meanings, for example:

   "fling things" - Can you show me how to fling this beanbag?
   What other words mean almost the same thing as "fling"?
   What things could the wind fling?
   What would the wind have to be like to do that?
   Etc.

e) Study the way the poem is put together:

How are the words "shake", "take" and "make" similar? (Discuss concept of rhyming words if it is unfamiliar.) How is the last verse tied to the first verse? Etc.

Language Practice

L 1. Clapping: Have students clap the rhythm of the poem as you recite it.

L 2. Musical Chairs: Set chairs (one less than there are students) back to back in a row. Students walk around the chairs as teacher recites the poem. Whenever students hear a previously specified word or phrase they sit on a chair. Remove one chair after each round.

L/S 3. Echo Drill: Recite the poem one line at a time. Students repeat each line after the teacher.

L/S 4. Oral Cloze: Recite the poem omitting words or phrases. Students provide these.

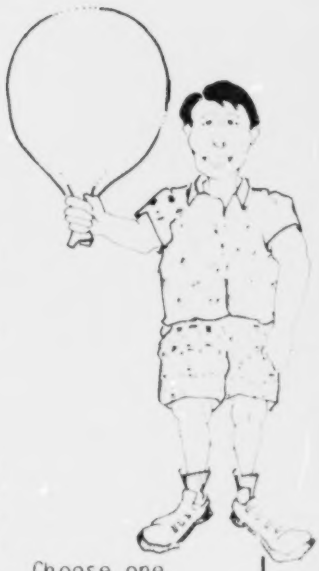
S 5. Choral Speaking: Chant the poem as a whole group. When students are very familiar with it, assign lines to individuals.

L/S 6. Logical Continuation: Students sit in a circle. One student starts the poem and stops suddenly. The next student tries to continue. If s/he can't the next student tries.

E.g., 1st student: "Go wind, blow. Push ...."
2nd student: "Wind, swoosh. Shake things ...."
Etc.

S/R 7. Sentence Strips: Write the poem on sentence strips. As you chant it with students place the sentence strips in the pocket chart:

Go wind	blow
Push wind	swoosh
Shake things	
Take things	
Make things fly	



Do various activities with students:

Match word cards to words on sentence strips.

Remove strips from chart and distribute to students. They replace them in their correct positions as you chant the poem with the other students.

Cut sentence strips into words. Have students rebuild the poem.

Etc.

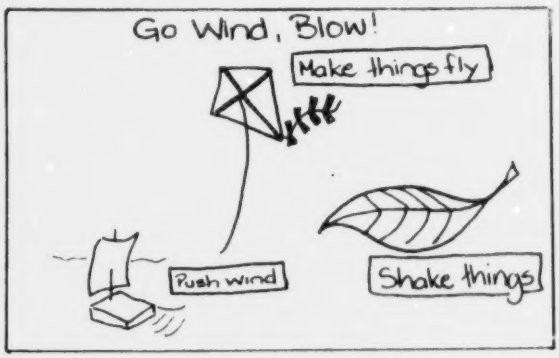
S/R 7. a) Webbing: Write the phrase "What the wind can do." in the centre of the chalkboard. Have students tell you words, either from the poem or their own list, that describe the wind's actions. Record these around the initial phrase. Choose one of these and have students name specific objects of that verb (i.e., What things could the wind shake?). Record these words on the web. Repeat this activity for all the verbs recorded on the web. Your finished web may look somewhat like this:

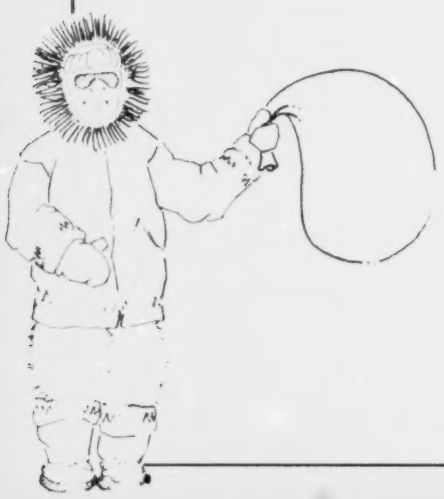
W 8. Make individual wind shape books using a cloze technique. Students fill in the blanks (provide a model for those who need it) and illustrate each page.

Application

1. Have students make a mural to illustrate the poem. Place sentence strips on the mural in appropriate places:

   E.g.,



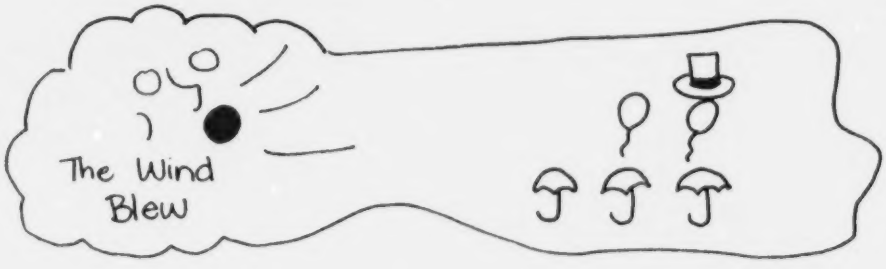


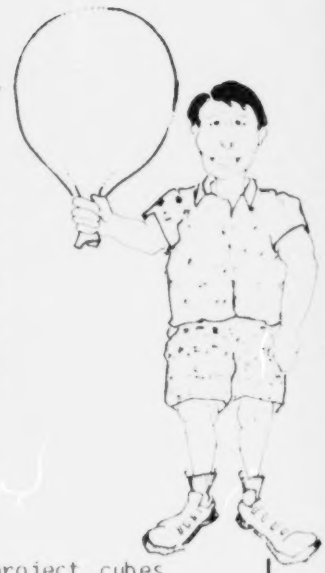
2. Use the web developed in LP #7 to write sentences describing what the wind can do.

   E.g. The wind can blow snow.
   The wind can blow leaves.
   The wind can blow sand.
   Etc.

3. Read Mrs. Mopple's Washing Line by Anita Hewitt. Make outline figures and tell it as a clothesline or magnetboard story.

4. Read Pat Hutchin's The Wind Blew. Use the story line to develop new stories. Have students draw story plaques for their original stories.



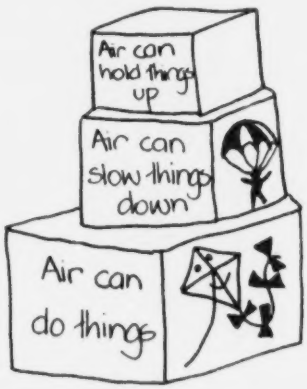


CULMINATING ACTIVITIES - GRADE TWO

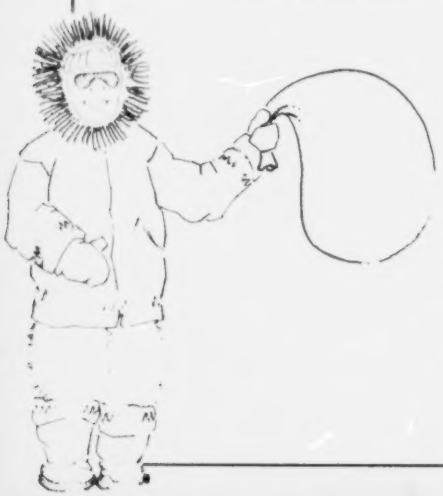
1. Theme Notebooks - Have students design their own covers for their Air Note books. These notebooks could include their favourite poems, songs or chants, pictures, small craft projects, worksheets, stories and poems that they have written, etc. that are related to the AIR theme. It is important for students to choose what they will put in their notebooks. The notebooks are their personal "souvenirs" which they may take home to share with family and friends.

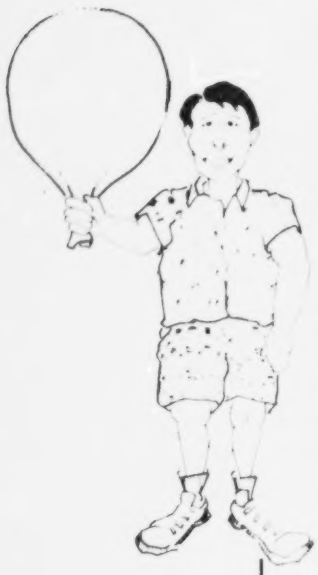
2. Take pictures of airplanes, helicopters, clothes on a clothesline, etc. Make a photo collage of air at work in your community.

3. Project Cubes: Have small groups of students work on project cubes (cardboard boxes) to display information they have learned about the topic.



4. Patchwork Poems: Have students find a picture that depicts air/wind at work. Have them browse through magazines and newspapers and cut out words or phrases that seem to relate to their pictures. They should then arrange the words on their pictures. When they are satisfied with the appearance, they may glue on the words.





EVALUATION ACTIVITIES - GRADE TWO

It is important to assess what your students have learned during this unit. The following activities evaluate language and concepts.

You can do them orally (in small groups or with individuals) to test listening and speaking or on paper to test reading and writing. These are only suggestions; you can substitute different content or vocabulary items to make them more appropriate for your students. You probably will want to include many other activities as well.

1. Tell or give the students four or five words or phrases. Have them indicate which do not belong.

   Air can make things
   - move.
   - turn.
   - run.
   - sway.
   - sleep.

2. Tell or give the students sentence beginnings to match to sentence endings.

Air can hold	a pinwheel spin.
Air can make	a parachute down.
Air can slow	a balloon up.

3. Tell or give the students the beginning of a sentence and a number of possible sentence endings. They indicate which sentence endings are appropriate for the sentence beginning.

   Air can
   - hold an airplan eup.
   - slow a falling leaf down.
   - push a sailboat.
   - make a rock breathe.

4. Give the students pictures of things discussed in the lessons (parachutes, balloons, etc.). Have them tell or write statements about the pictures.

INITIAL ASSESSMENT ACTIVITIES - GRADE THREE

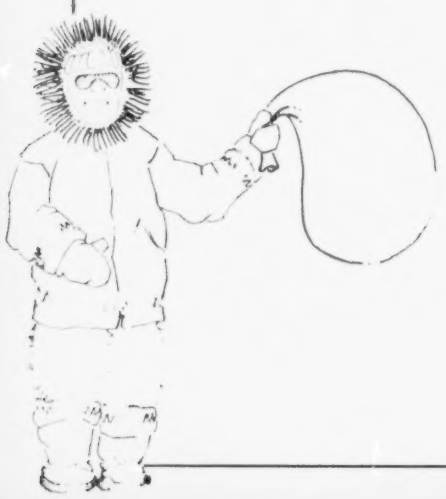
The following activities should be done before you teach any of the lessons. They will assist you to determine:

1. what students already know about the concepts of the topic and therefore where instruction should begin;

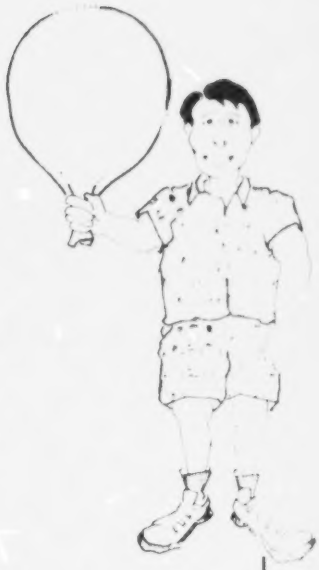
2. what interests students have in the topic and therefore the direction the unit should take; and

3. what language students already have to discuss the topic and what language they require.

One of the basic principles of the Language Development Approach and of all good teaching is that you should start with the student when planning and carrying out a unit. Before you begin to teach it is important to assess your students' knowledge of and interest in the topic. You should determine what students already know about the topic/concepts you intend to cover. What ideas do students already have? What misconceptions do they have which you must address? What gaps are there in their knowledge which require that you teach certain lessons? What concepts do they know well enough so that you can skip the lessons which teach those concepts? What questions do they have? What relationships do they see between different aspects of the topic?



It is also important to identify what experiences students have which relate to the topic/concepts. By identifying these and building upon them in the lessons you can help students relate the new ideas and information to their own lives. It is important to do this because it assists students to internalize new concepts. It helps students make the concepts part of



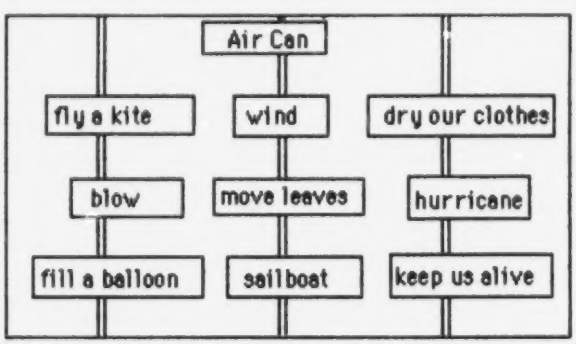
the conceptual framework which they use to understand and describe their world. If they do not have concrete, firsthand experiences to relate to each concept you will have to provide them wherever possible.

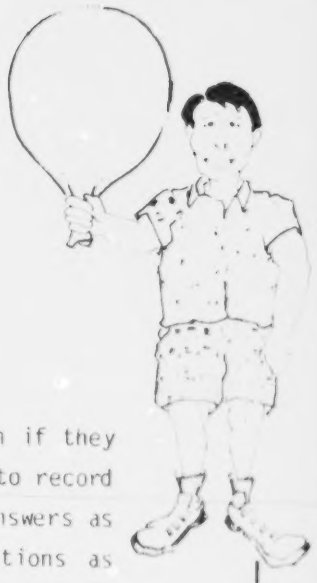
Another use for these activities is to help you identify particular interests of individuals, groups of students, or the whole class. You can then include activities in the lessons which involve student interests, thereby increasing motivation for them to participate and learn. You may decide to add, substitute or omit some lessons because of students' interests.

These activities will also help you determine what language students have to discuss the topic. You can find out what vocabulary items students already know and what associations they have for each word. It is important to ascertain the meanings students attach to words; sometimes their interpretations may surprise you! If they do not clearly understand terms or use them incorrectly, it will prevent them from understanding and incorporating the concept into their mental framework.

1. Brainstorming

Look at pictures of windmills, airplanes, clothes on a line, etc. Ask students to tell you what they know about what air can do. Record their answers on cards and hang them on masking tape strips (sticky surface up) which you fasten to the wall or the chalkboard.



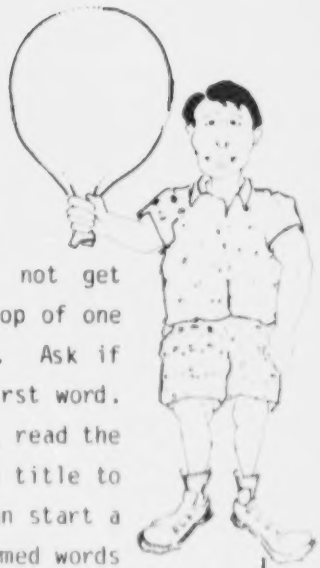


If students have difficulty with this activity you may wish to direct their thinking or prompt ideas by asking more specific questions:

"What happens when air pushes on things?
Can you think of any machines that need air to work?"
Etc.

Encourage students to predict answers to these questions even if they aren't sure of the exact responses. It might be interesting to record their predictions separately and compare them to the actual answers as you study the unit. Students may think of their own questions as well. Keep a list of all the questions the class cannot answer to focus the lessons you teach during the unit.

After you record their responses on the cards, have students chant the words with you. Talk about the words: Which word is the most interesting? the least interesting? the most puzzling? What other word can you think of that means almost the same thing? What comes to your mind when I say _____? What do you think this word means? Etc.



2. Categorizing:

Distribute the word cards from the brainstorming session. Be sure to tell students the words you give them. Give younger students only one card at a time so they will not get confused. Have one student place his/her word card at the top of one of the masking tape strips and tell the word to the class. Ask if there is anyone else who has a word that belongs with the first word. Have another student place his/her word card under the first, read the word and explain why it belongs with the first word. Give a title to these two cards which now form a category. Ask if anyone can start a new category. When students have placed all of the brainstormed words in categories, discuss the titles and change them if necessary. Chant the words in each category with students. Transfer the words to a flowchart to provide a permanent reference.

As you teach the unit you may wish to add new information to the chart. You may also identify new questions and, hopefully, the answers. At the end of the unit you can review the chart with students. Keep it as a reference for future use.

SAMPLE QUESTIONS

You can use these questions during the initial assessment activity to determine what experiences, language, and knowledge students have about the topic. You can also use the questions for assessing thinking processes throughout the concept development and application phases of each lesson and during the culminating and evaluation activities.

QUESTIONS FOR ASSESSING EXPERIENCE:

1. Have you been in a situation where _____?
2. What do you know about _____?
3. Have you ever seen _____?
4. Have you ever experienced _____?
5. Have you ever been _____?
6. Have you ever done _____?
7. Has something like this ever happened to you?
8. When was the last time you _____?

QUESTIONS FOR ASSESSING LANGUAGE:

1. What do you think these words mean?
2. Can you give me another word that means _____?
3. What comes to your mind when I say _____?
4. Have you heard of the word(s) _____?
5. What words can you think of when I say the word ___?

QUESTIONS FOR ASSESSING THINKING PROCESSES:

Cognitive Memory (details, information)

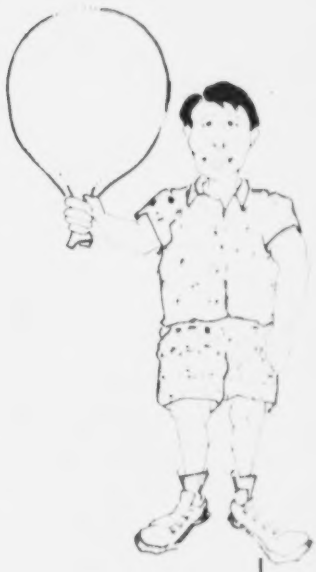
1. Who.....?
2. What are the facts?
3. What are the most important details?
4. What is the.....?
5. What do you mean by.....?
6. What is your interpretation of what happened? (What do you think happened?)
7. When?
8. Where?

Convergent/Generalizing (getting the main idea)

1. What are the chief points?
2. Given that information, what is the main idea?
3. What is the single most important idea?
4. State the idea in one sentence.
5. Explain _____.

Structuring/Relating (arranging relationships)

1. Categories: Which group does that belong to?
   How would you classify.....?
   What type would you.....?
2. Comparisons: How are they alike? same? similar? identical?
3. Contrast: How is it different? in opposition to? unlike?
4. Cause and Effect: What will happen if? Why?
   What will happen as a result of?



Divergent/Using/Applying

1. What might happen if _____?
2. If you use that idea, what would it mean for _____?
3. Apply that idea to our (this) situation.
4. What would result if _____?
5. If you were given these facts, what would you do to _____?
6. How would it be different if we used this idea?
7. What could the advantages/benefits be if we applied this idea/process?
8. What do you think the (story/paragraph) will be about?

Evaluation/Judging/Valuing

1. How do you feel about this idea?
2. What is your opinion?
3. What is the best _____?
4. Are you satisfied with that answer/plan?
5. Can this statement be made? Why?
6. Out of all the information, what can be used to prove your point?
7. How would you judge?
8. What is your opinion or conclusion about the product/plan/idea?
9. Why did you think it worked/didn't work?
10. What is fact? What is opinion?

Science/Social Studies	Teacher's Notes
1. How did people use air in the past? How do we use it today? How will we use it in the future? Find pictures/draw pictures of people using air. Make a list of machines that use air pressure (e.g., car hoist, air brakes, tire pump, etc.) Make a list of household items or toys that use air pressure (drinking straw, toilet plunger, air mattress, inflatable toys, vacuum cleaner, etc.) 2. Discuss the ways in which the wind helps plants - spreads seeds, pollinates. 3. Take students outside and give each a large sheet of paper. Ask them to make their papers stick to them. (They won't be able to _____.) 4. Provide two boxes: one with a deep, tight-fitting lid and the other with a shallow, loose lid. Why is one lid harder to push on than the other? 5. Research the history of flight. Present the information on a mural.	These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

ACTIVITY IDEAS

TOPIC C: AIR PRESSURE CAN HELP OR HINDER US

Math	Language Arts

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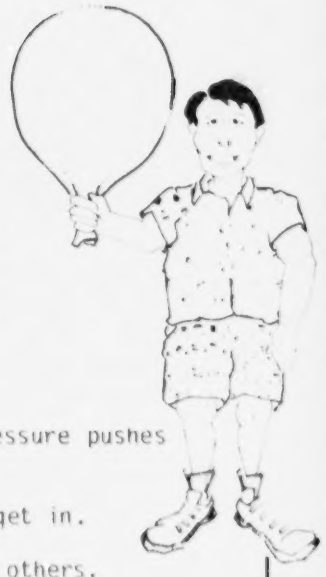
Music, Poems, Stories	Art
1. "The Tire"	1. Build junk flying machines: Use plastic containers, boxes, cardboard tubes, toothpicks, popsicle sticks, etc. to design helicopters and airplanes.
Physical Education/Movement	**Special Activities**
	1. Students design their own paper airplanes: Experiment with different weights, kinds, and sizes of paper to discover how flying is affected by each. Try folding the paper in different ways. Fly the airplanes from different heights and upside down. Have a contest. Award prizes for the longest flight, the shortest flight, the hardest landing, the most unique plane, etc.



Lesson: Air Pressure Can Help or Hinder (Grade Three)

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

Science Concepts

1. When there is a vacuum on one side of an object, air pressure pushes things toward the vacuum.
2. The contents of a container cannot get out unless air can get in.
3. Air pressure helps people in some ways and hinders them in others.

English Vocabulary (*actually developed in this lesson)

* air pressure
* help
* hinder
* vacuum
* plunger
* suction cups
* straw
* vacuum cleaner

English Sentence Patterns (*actually developed in this lesson)

* How does air pressure help/hinder people?
* Air pressure helps/hinders people _____.

Special Materials Required

Toilet plunger
Suction cup darts, soap dishes, pencil sharpeners, etc.
Drinking straws
Vacuum sealed jar or can
Pictures of air in use (airplanes, gliders, wind generators, clothes drying, etc.)

Concept Development/Language Exposure

1. Place a ruler on a table with part of it extending past the edge of the table. Place a large piece of newspaper over the ruler. Press the paper firmly against the table surface so no air is underneath. Ask students what will happen if they try to knock the ruler off the table. Have students try it. What happens? Why? (Air is pressing down on top of the paper and makes it hard to knock the ruler off.) Introduce the term "air pressure." What other examples of air pressure can students think of? (Air slowing things down, holding things up, etc.)

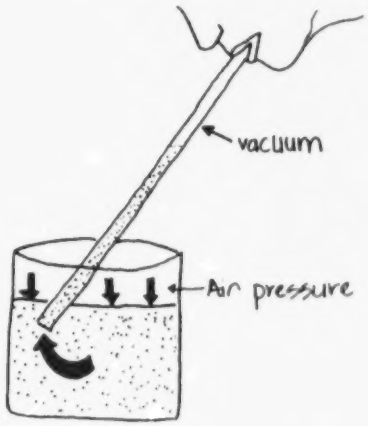
2. Do the following experiment to show how great the effects of air pressure can be:

   Get a large, empty metal container with a small opening. (Duplicating fluid often comes in such cans.) Take the cap off and put about 250ml of water in the can. Set it on a heated stove or hot plate with the cap off. When steam comes out of the can, remove it from the heat and quickly put the cap on. (Be sure to use oven mitts.) Let the can cool. What happens? (The sides should cave in.) Why? (When the can was heated, the water inside changed to steam and pushed the air out. When the steam cooled it changed back to water. Then there was only water inside the can and almost no air. Outside the can, however, the air still pushed hard against the sides.) Get another can identical to the first. Take off the cap. Have two students press on the sides of the can as hard as they can. Can they push in the sides?

3. Put a small hole in the side of a toilet plunger. Push the plunger against the floor. Let students listen for and feel the air escaping from under the plunger. Have students try to pull the plunger off the floor. Is it easy or hard? Have them try again as you put your finger over the hole. Does this make it easier or harder? Why? (When the hole is covered it is harder to lift the plunger. No more air can get under the plunger. If it could, the air would press upward and make it easier to lift the plunger. The air pressure is greater on top of the plunger than under it.) Have students collect items that operate on this principle: suction cup darts, soap dishes, coat hooks, pencil sharpeners, dashboard cups, etc. Model the sentence pattern, for example, "Air pressure helps people when they use a suction coat hook."

4. a) Provide each student with a drinking straw and a clear plastic glass filled with water. Ask students to hold their straws up in front of them. What is inside the straws? (Air.) Now have them place their straws in the glasses of water. What happens? What is at the top of the

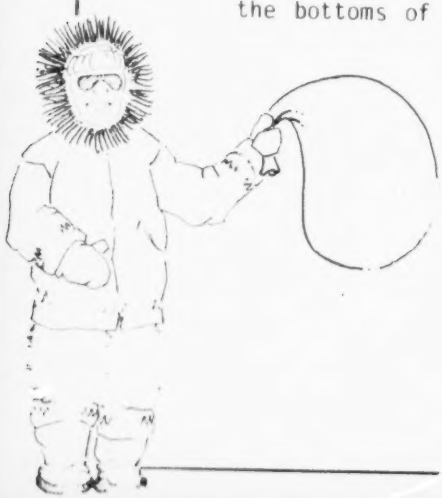
straws? (Air.) What will happen if you take the air out of the straw by sucking? (The water will rise up the straw.) Illustrate this principle by means of a diagram:

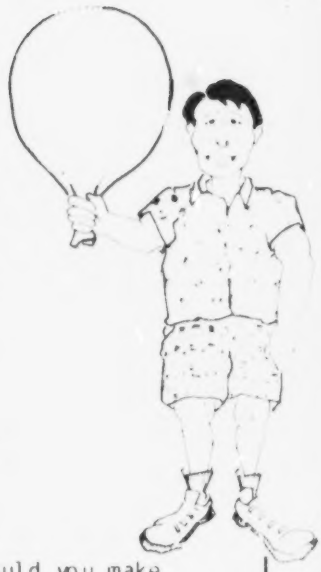


When you suck on the straw, you take all of the air out. This makes a vacuum. A vacuum is an empty space that has little or no air in it. Air pressure pushes on the water in the glass and pushes it toward the vacuum. Model the sentence pattern, "Air pressure helps people when they drink through straws."

b) Using a real vacuum cleaner, demonstrate that it works in much the same way as a drinking straw. The motor sucks the air out of the hose and makes a vacuum. Air pressure outside the hose makes the air go up the hose. Dirt is picked up by the moving air. Model the sentence pattern, "Air pressure helps people when they use a vacuum cleaner."

5. Divide class into small groups. Provide each group with a plastic bag, a wide-mouthed container and a rubber band. Instruct them to push the plastic bags down inside the containers so that there is only a little air between the bags and the containers. Tell them to pull the edges of the bags over the mouths of the containers and seal them with the rubber bands. Now, have them reach into the containers, take hold of the bottoms of the bags and try to pull them out . Can they do it? Why not? (The air pressing down on the bag is pressing much harder than the air between the bag and the container.) Have students try the experiment again holding the container in various positions (on its side, upside down). Does it make any difference? Does air pressure only push down?



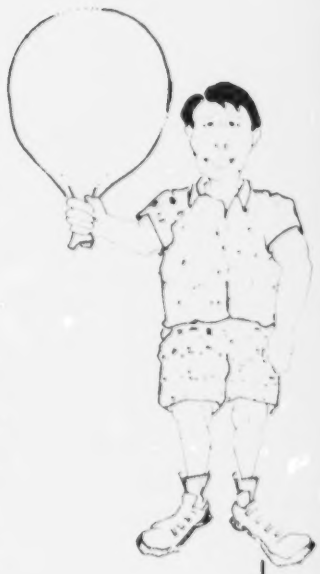


6. a) Bring a can of cranberry sauce into the classroom. Ask students what is inside the can. Is there much air? (No.) Remove the top of the can and have one student try to remove the sauce from the can by holding it upside down. Does the sauce come out? Why not? Ask students to think of ways that would make it easier to get the sauce out. Try their suggestions. Model the sentence pattern, "Air pressure hinders people when they try to get something out of a can." Discuss the meaning of the word "hinders."

   b) Have students attempt to empty jugs of water (bleach jugs) into pails. What happens? (The water comes out in spurts.) Have them try it holding the mouths straight down. Is it easier or harder? Now have them tilt the mouths so that air can get in as the water gets out. Is it easier or harder? How else could you make it easier to pour the water? Model the sentence pattern, "Air pressure hinders people when they pour water out of a jug."

   c) Have students attempt to pour liquid out of cans which have only one hole punched in their tops. What happens? How can they make the liquid come out more easily?

7. Divide a chart into two parts. Label one side "Air pressure helps" and the other "Air pressure hinders." Brainstorm ways in which air pressure helps people. Model students' responses using the sentence pattern. Record ideas on the chart. Repeat with pattern "Air pressure hinders people _____." Have students be on the lookout for instances of air pressure helping/hindering people. Add these to the chart.



Language Practice

L 1. Here, There and Everywhere: Mount pictures of air helping/hindering on the walls of the classroom. Have a puppet ask a question of teacher. The teacher then makes a statement about one of the pictures. Students run to the appropriate picture.

E.g., Puppet: "How does air pressure help people?"
Teacher: "Air pressure helps people by holding helicopters up."
Students run to picture of helicopter.

L 2. True/False Chairs: Place two chairs together at the front of the classroom. Label one TRUE and the other FALSE. Divide class into two teams and stand them in lines facing the chairs. Teacher makes a statement. The first player from each team races to get to the correct chair and sit down.

E.g., Teacher: "Air pressure hinders people when they drink through straws."
Students race for "FALSE" chair.

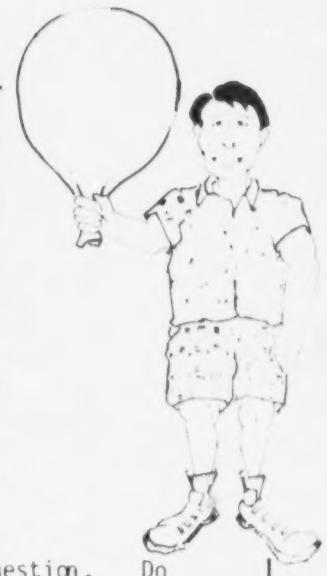
L/S After some practice, have student sitting on the chair repeat the teacher's statement.

L/S 3. Spin the Bottle: Sit on the floor in a circle with the students. Make a statement and spin the bottle. The student at whom the bottle is pointing repeats the statement.

L/S 4. Substitution Drill: Make a statement, then provide a phrase for students to substitute.

E.g., Teacher: "Air pressure hinders people when they pour water from a jug. Pour ketchup from a jar."
Students: "Air pressure hinders people when they pour ketchup from a jar."

L/S 5. Double Circles: Divide class into two groups by numbering off - "one-two-one-two-etc." Have all "ones" stand in a circle facing out. The "twos" form a circle around the "ones," with each "two" facing a "one." "Ones" ask questions of "twos" facing them (using the sentence pattern). After "twos" answer, they move one step to the right so they are facing a new partner. Continue in this manner until students are back to their original partners; then "twos" will ask questions of "ones."



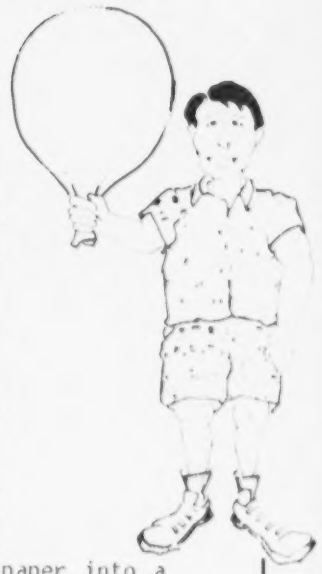
S 6. Charades: Divide class into small groups. Each group chooses a statement to act out. Allow a few minutes to practice. The first group acts out their statement using body movements only. The rest of the class tries to guess what statement is being dramatized.

S 7. Ball Bounce: Students stand in a circle. One student, IT, stands in the centre. IT bounces a ball to a player and asks a question using the sentence pattern. The player who catches the ball must name an example before it counts to 10. If successful, s/he takes IT'S place.

S/R 8. Dictation: Write a question at the top of a piece of chart paper "How does air pressure help people?" Read the question with students and have them dictate appropriate responses. Record these below the question. Do various chart activities: Count the number of times a specified word appears on the chart. Isolate words with a sliding word frame. Etc. Repeat with question "How does air pressure hinder people?"

Cut statements into strips and distribute to students. Have them, in turn, place their strip under the appropriate question and read the statement.

R/W 9. Sentence Roll: Take a cardboard roll and wrap a sheet of paper around it; mark off the circumference. Write the words in columns which will go to make up the parts of sentences. Cut the columns into strips; wrap these around the roll and join the ends with tape. They should revolve easily. Have students copy sentences onto appropriate sides of a worksheet.



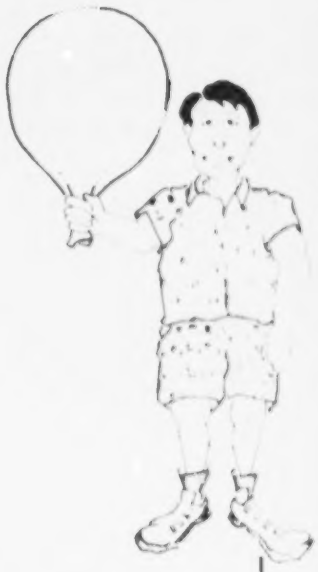
Application

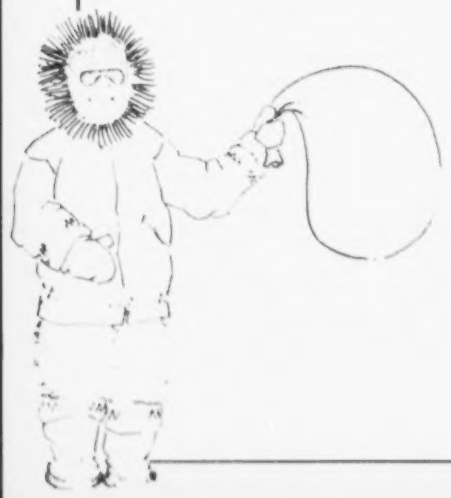
1. Have a contest to see who can empty a jug of water in the shortest time. Provide jugs, pails, rubber tubes, nails, etc. Allow students to experiment over a period of time to see what works best. Keep track of the time it took to empty a jug using each method.

2. Some of the Concept Development activities may be used as Application activities.

3. Have students make barometers by following these instructions: Get a glass jar with a wide mouth. Cut a piece of a large balloon and stretch it over the mouth of the jar. It should be smooth and tight. Hold it in place with a rubber band. Snip one end of a drinking straw so it comes to a point. Tape the other end of the straw to the centre of the balloon. Fold a piece of construction paper into a triangular tube. Tape it together. Stand it up on one end. Put the tube next to the pointed end of the straw but be sure it doesn't touch the straw. Make a pencil line on the tube where the pointer points. Write the weather condition next to the line (i.e., sunny, rainy, cloudy, etc.)

   Have students check the position of the pointer once or twice a day. It will move up or down as the weather changes. Each time it moves, students should draw a line and write down the weather. The barometer measures air pressure. When the pointer goes up it is usually clear, sunny weather. When the pointer goes down, it is usually cloudy. After students have made some sunny and cloudy marks, they can begin to predict the weather.





Science/Social Studies	Teacher's Notes
1. Research the history of hot air balloons: Who invented them? Who was the first person to fly in one? Where did the first flight take place? What is the longest journey ever taken by hot air balloon? Etc. 2. Plan a trip that you would like to take in a hot air balloon. Mark your route on a map. What places would you fly over? What will you see as you fly? Keep a "journal" of your trip. Include pictures of things you "saw."	These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

ACTIVITY IDEAS

TOPIC D: EFFECTS OF TEMPERATURE ON AIR

Math	Language Arts
1. Make up math problems relating to hot air balloons. E.g., It took Sam 1 hour to travel 40 km. in his balloon. How long will it take him to go 80 km? 2. Make math worksheets on balloon shaped pages. 3. Place a thermometer near the ceiling and another near the floor. Record the temperatures over a period of time. Graph the temperatures. Now, place a fan near the ceiling. Record and graph the temperatures over the same period of time. Compare to the original graph.	1. Brainstorm endings for the sentence, "Ballooning is like _____."

Music, Poems, Stories

1. "Up, Up and Away in My Beautiful Balloon"

Art

1. Look at pictures of hot air balloons. Have each student design their own balloon. Place all the balloons on a mural and have some of the students design a background for it.
2. Construct hot air balloons from small boxes, string, party balloons.
3. Cut pictures of hot air balloons from magazines. Use them to make a collage.

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Physical Education/Movement

1. Pretend to be hot air balloons: As the burner is turned on and the air inside you starts to heat up you begin to get bigger and bigger and start to lift up off the ground. When you are full of hot air, your pilot has to tie you down with strong ropes because you are so light that you tug and tug, trying to float up into the sky. Finally, he unties the ropes and you are drifting gently up, up, up. You float up over the lakes, the rocks, the rivers and towns. Soon, it is time to return to the ground. The pilot turns the burner off and you start to shrink and go down, down, down until you are safely back on earth.

Special Activities

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Lesson: Air Expands and Contracts (Grade Three)

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

Science Concepts:

1. Air expands when it is heated.
2. Air contracts when it is cooled.

English Vocabulary (*actually developed in this lesson)

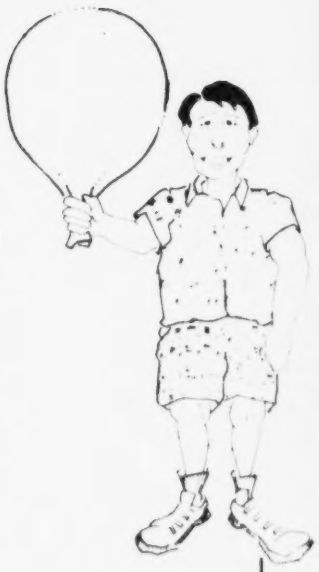
* expand/s
* contract/s
* heat/heated
* cool/cooled

English Sentence Patterns (*actually developed in this lesson)

* What happens when you heat/cool air?
* When you heat/cool air it expands/contracts.

Special Materials Required

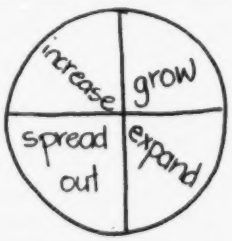
Balloons
Small jar, plastic sandwich bag, bowls, ice
Hair dryer
Glass bowl, glass bottle, glass tubing, stopper



Concept Development/Language Exposure

1. Introduce the terms "expand" and "contract": Hold up an uninflated balloon and ask students what will happen when you blow up the balloon. Demonstrate that the balloon gets bigger when you blow it up. Tell students that another word that means "get bigger" is "expand." Use the word "expand" to talk about other things that get bigger when they are inflated. Ask students what will happen when you let the air out of the balloon. Demonstrate that the balloon gets smaller when the air is released. Tell students that another word that means "get smaller" is "contract." Use the word "contract" to talk about other things that get smaller when air is released from them.

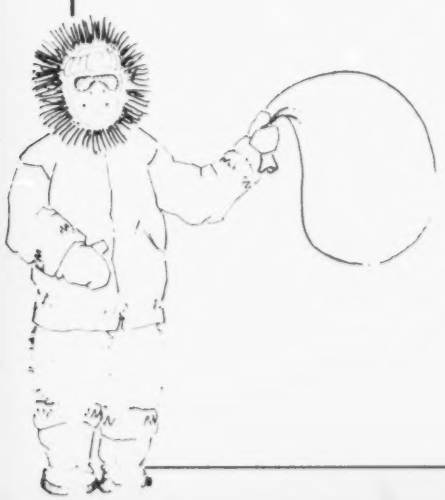
   b) Brainstorm other words that mean the same as "expand" and "contract." Make word wheels and display.



2. Gather these materials: small jar, plastic sandwich bag, rubber band, bowl of very hot water, bowl of cold water and ice. Squeeze all the air out of the plastic bag. Fasten it over the mouth of the jar with the rubber band. Ask students what is in the jar. What do they think will happen if you place the jar in the bowl of hot water? Demonstrate. What happened to the plastic bag? Why did it get bigger? Model the sentence pattern, "When you heat air it expands." Now ask students what they think will happen if you place the jar in a bowl of cold water. Demonstrate. What happened to the plastic bag? Why did it get smaller? Model the sentence pattern, "When you cool air it contracts." Ask students what they think will happen if you put the jar back into the bowl of hot water. Demonstrate. Discuss the results using the terms "expand" and "contract."

3. Have students work in small groups for the following activities:

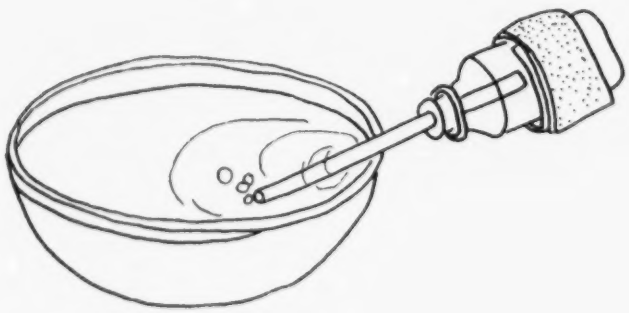
   a) Inflate a balloon and tie the neck. Measure the circumference of the balloon. Heat the balloon with a hair dryer. Ask students to predict what will happen to the size of the balloon. Measure the circumference again. Discuss the results using the sentence pattern, "When you heat air it expands."



b) Inflate another balloon and measure its circumference. Place the balloon in a freezer (or outside if it's winter). Ask students to predict what will happen to the size of the balloon. Measure the circumference again. Discuss the results using the sentence pattern, "When you cool air it contracts."

4. Fit a glass tube and stopper into a bottle. Pour coloured water into a glass bowl. Hold the bottle at an angle so that the end of the tube is in the coloured water. Soak a cloth in hot water. Wring it out and wrap it around the bottle. Soon, bubbles will come out from the end of the tube. Ask students to explain why this is happening. (The expanding air is escaping from the bottle.)

Now, soak the cloth in very cold water and again wrap it around the bottle. Coloured water will start to rise in the tube and follow into the bottle. Why? (The air inside the bottle cools and contracts and the water flows into the bottle to fill the space.)

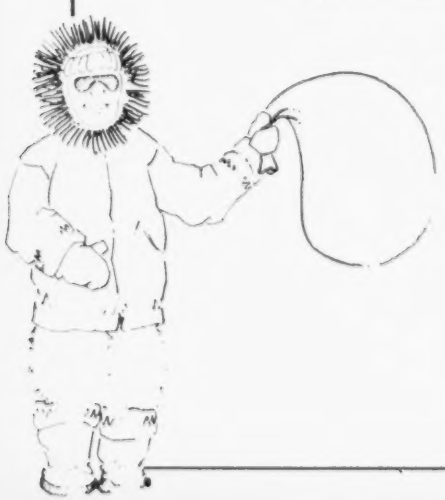


Language Practice

L 1. Stand Up/Sit Down: Students sit in chairs or on the floor and listen for an assigned word. Say a series of words. When students hear the assigned word they stand up. When they hear it again, they sit down.

E.g., Teacher: "Listen for the word expand: explain, expand, expose, excel, expand, exert, exercise, etc." (EASY)

Teacher: "Listen for the word expand: expanded, expand, expansion, expansive, expand, expanding, etc." (MORE DIFFICULT)



L 2. Elimination: Recite a list of vocabulary related to a topic. Include some non-examples of the topic. Students indicate which items do not belong.

E.g., expand: grow get bigger get smaller

L 3. Change Game: Students stand in pairs, back-to-back, with elbows interlocked. Make a statement. If the statement is false, students change partners.

E.g., Teacher: "When you heat air it expands; when you heat air it gets bigger; when you heat air it contracts; etc."

L/S 4. Echo Drill: Make a statement. Students repeat it immediately.

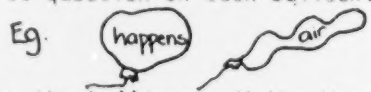
L/S 5. London Bridge: Two students form a "bridge" with their arms. The other students walk under the bridge as music plays. When the music stops, the bridge drops and traps one student. S/he must answer a question posed by the teacher or other students.

R 6. Sentence Strips: Introduce sentence patterns to students by placing sentence strips in the pocket chart. Ask students if there are any words that they recognize. Read the strips with students several times.

What happens when you heat air?

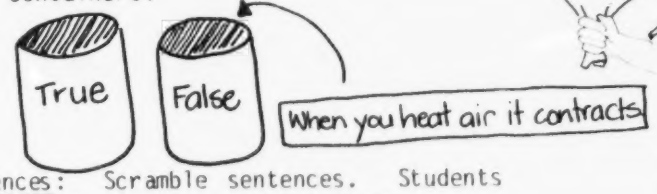
When you heat air it expands.

R 7. Balloon Sentences: Inflate a number of yellow balloons and write one word of the first question on each balloon:



Deflate the balloons. Write the answer to the above question in the same manner on green balloons. Write the second question/answer pair on red and white balloons in the same way. Mix all the deflated balloons together. Each student then chooses one. All students with yellow balloons stand together, all those with green balloons stand together, etc. When you give a signal, all students blow up their balloons. Each team seats themselves on the floor so that they can read their words in the correct order.

R 8. Classification Containers: Write statements about heated/cooled air on cards. Students place them in the appropriate containers:



W 9. Scrambled Sentences: Scramble sentences. Students write down the correct version of the sentence.

Application

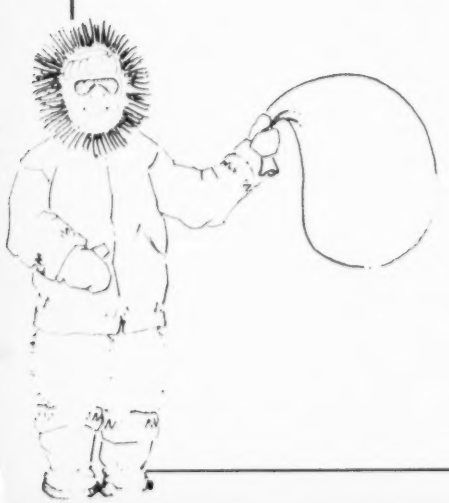
1. Brainstorm a list of things that are warm. Write a group poem, "What is warm?"

   E.g., What is warm?
   Warm is a spring afternoon.
   Warm is my bath.
   Warm is my bed.
   Etc.

   Repeat the activity using the word "cool."

   E.g., What is cool?
   Cool is an ice cream cone.
   Cool is the wind.
   Cool is the river.
   Etc.

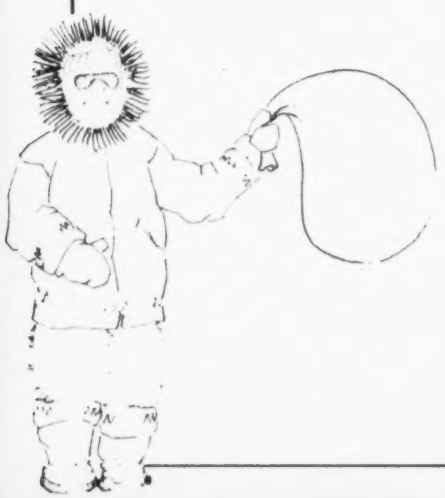
2. Divide class into small groups. Provide each group with a glass jar whose metal lid is screwed on tightly. Have students attempt to remove the lid in a variety of ways. Have them record their ideas and note which ones worked and which didn't. Have groups present their findings to the class. (If nobody suggests using heat, run some hot water over a lid for a minute or two. Ask students what they think will happen. Demonstrate that the lid is now easier to remove. Discuss the reason for this and develop a statement that explains what happened, i.e., "When you heat metal it expands.")



3. Review what happens to air when it is heated and cooled. Ask students if they know what happens when you heat or cool water. Have them devise experiments to test their responses, for example:

   Fill a plastic jug with water and place cap on tightly. Measure the circumference of the jug. Place it in a pail of very hot water. After a few minutes, remove the jug and measure it again. Record the results. Now, place the jug in a freezer until the water is frozen. Remove it and measure the circumference. Record the results. Compare the results to the original measurement.

   Did the experiments confirm or contradict students' predictions? Develop statements to describe what happens to water when it is heated and when it is cooled, i.e., "When water is heated/cooled it expands."



Lesson: Warm Air Rises, Cool Air Sinks (Grade Three)

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

Science Concepts

1. Air rises when it is heated.
2. Air sinks when it is cooled.

English Vocabulary (*actually developed in this lesson)

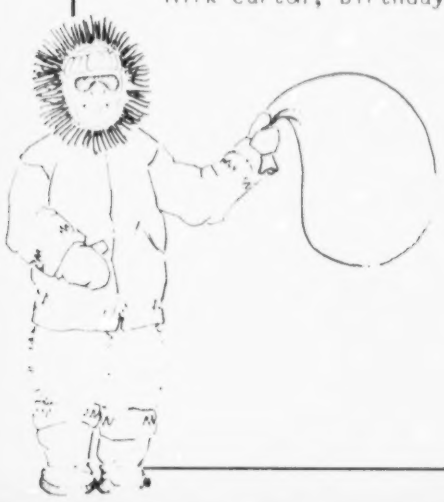
* rise/rises
* sink/sinks
* heat/heated
* warm/cool

English Sentence Patterns (*actually developed in this lesson)

* What happens when you heat/cool air?
* When you heat/cool air it rises/sinks.
* Warm/Cool air rises/sinks.

Special Materials Required

Thermometers
Drinking straws, small paper bags
Balloon, hair dryer
Milk carton, birthday candle



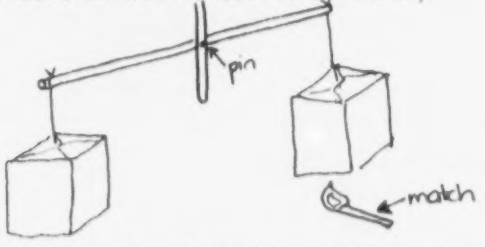
Concept Development/Language Exposure

1. a) Discuss the meanings of the words "warm" and "cool." Make lists of things that are warm and things that are cool. Cut pictures from magazines of warm and cool things and use them to make collages.

   b) Have students carefully place their hands over a stove or heater. What do they feel? (Warm air.)

   c) Place a thermometer close to the floor and one close to the ceiling. After a little while, check the temperatures registered on both thermometers. Where is the temperature higher? lower? Discuss possible reasons why this is so.

2. a) Make a balance using two drinking straws and a pin. Hang two small paper bags upside down on the ends of one of the straws. Hold a burning match under one of the bags. (Be careful not to set it on fire.)

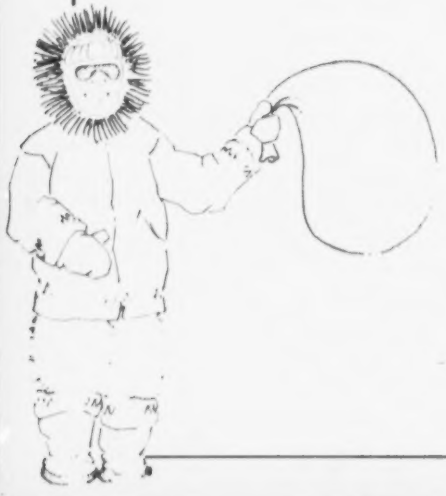


What happens to the bag? Why? What will happen if the match is taken away? Demonstrate. What will happen if you place a burning match under the other bag? Demonstrate. Discuss the results of the experiment:

What is in the bags?
What is the air doing when it is heated?
Why did the heated bag move up?
What happened when the flame was taken away from the bag?

In which direction does heated air move?

(Explanation: The flame under the bag heats up the air in the bag and expands it. This leaves less and lighter air in the bag. This lighter air pushes under against the bag and the bag moves up. When you take the flame away, the warm air cools down and slowly the balance of the two bags is restored.



b) Make a bag balance as in the activity above, but this time have the bags hanging right side up. Take a jar of cold air from the freezer and pour it into one of the bags. What happens? Why? What will happen when the air in the bag warms up? Discuss the results of the experiment:

What is the cool air doing?
Why did the bag holding the cool air move down?
In which direction does cool air move?

3. Inflate a balloon and tie the neck. Hit it into the air. Watch it sink. Now, heat the balloon with a hair dryer. As you do so, carry on a discussion with the students:

What is happening to the air in the balloon?
What do you think will happen when I let the balloon go? Why?

Hit the heated balloon into the air. What do students observe? Discuss the results using the sentence patterns.

4. Seal the top of a large milk carton with staples. Cut a hole about one inch in diameter in the bottom of the carton. Cut a hole about 1 and 1/2 inches in diameter in one side of the carton near the bottom. Cut another hole of the same size in one side at the top of the carton.

Affix a candle (birthday cake size) to a metal jar lid, light it, and place it under the carton. Place a burning cone of incense or a burning cigarette about two inches from the hole in the lower side of the carton. Ask students to predict what will happen to the smoke from the incense. (It will flow into the lower hole and out of the hole in the top of the carton.)

Have students check the temperature of the air near the hole in the side of the carton. Now have them check the temperature of the air just inside the hole at the top of the box. Compare the temperatures. Why did the smoke go up? (The smoke follows the air currents. The cool air outside the carton moves in through the lower hole to replace the warm air which is rising out the top hole.)

5. Model the sentence patterns in a conversation with a puppet, for example:

Teacher: "What happens when you heat air?"
Puppet: "When you heat air it rises."
Teacher: "What does the word rises mean?"
Puppet: "It means that it goes up."
Teacher: "So, that means that warm air goes up?"
Puppet: "That's right. Warm air rises."
Etc.

Language Practice

L 1. Simon Says: Call out statements. Students make appropriate motions only if you say "Simon says" at the beginning of the statement.

E.g., Teacher: "Simon says warm air rises." (Students rise up on their tiptoes.)
Teacher: "When you heat air it rises." (Students stand still.)

Etc.

L 2. True/False: Ask questions of your C.A. (or a puppet) using the sentence patterns. Students indicate by a physical response if the statement is true or false.

L/S 3. Spin the Bottle: Sit on the floor with students in a circle. Make a statement and spin the bottle. The student at whom the bottle is pointing repeats the statement.

L/S 4. Parrots: Make a series of statements using the sentence patterns. Students are parrots and repeat the statements. They repeat only true statements, however.

L/S 5. Wool Web: Students sit in a circle around teacher. Begin a statement, then throw a ball of wool to a student while still holding on to the end. That student completes the statement and throws the wool back to the teacher while still holding on to his/her end. Continue with other statements until each student has had a turn.

L/S 6. Whisper Game: Divide class into two teams. Whisper a statement to the first player on each team. Those students whisper the statement to the next students and so on down the two lines. The last player in each line repeats the statement out loud.

R 7. Sentence Strips: Introduce the written forms of the sentence patterns to students using sentence strips in a pocket chart:

What happens when you heat air?

When you heat air it rises.

What happens when you cool air?

When you cool air it sinks.

R 8. Find Your Mate: Cut sentence strips from LP#7 in half and distribute to students. Students attempt to find the person who is holding the other half of their sentence and read it together and then read to the class.

R/W 9. Sentence Building: Students create sentences by choosing and combining words or phrases from three different columns.

When you heat	air	rises.
When you cool	air	sinks.
Warm	air	it rises.
Cool	air	it sinks.

Application

1. Floating Bubbles: Go outdoors on a very cold winter day. Blow some bubbles (use dish detergent and water). Your warm breath will make the bubbles very light. They will be much lighter that the cold winter air and will quickly float upwards.

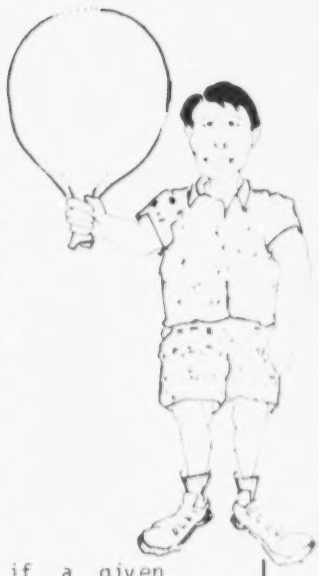
2. Have students do research on hot air balloons: How do they work? What is the longest journey ever taken in a hot air balloon? Etc.

3. Explain in simple terms what creates wind. The hot land heats the air above it and the warm air rises. As the warm air rises, cooler air moves in beneath it. We call this movement of air wind.

   To demonstrate this principle, do the following activity:

   Draw a spiral on heavy paper and cut along the line. Tape a straight pin to the eraser end of a pencil. Balance the paper spiral on the pin point. Hold the spiral about 10 cm above a burning candle. Watch what happens.

   Discuss the results: What did the burning candle do to the air?
   What happened to the heated air?
   Why did the spiral turn?



CULMINATING ACTIVITIES - GRADE THREE

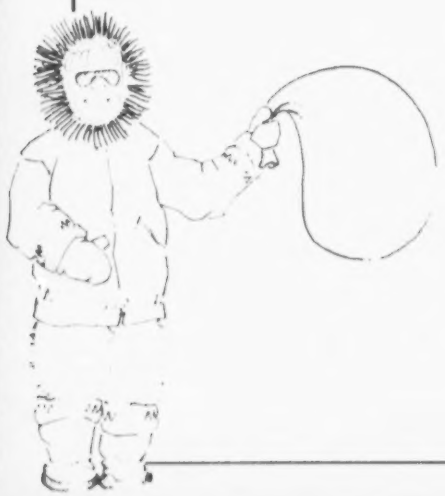
1. Theme Notebooks - Have students design their own covers for their Air Note books. These notebooks could include their favourite poems, songs or chants, pictures, small craft projects, worksheets, stories and poems that they have written, etc. that are related to the AIR theme. It is important for students to choose what they will put in their notebooks. The notebooks are their personal "souvenirs" which they may take home to share with family and friends.

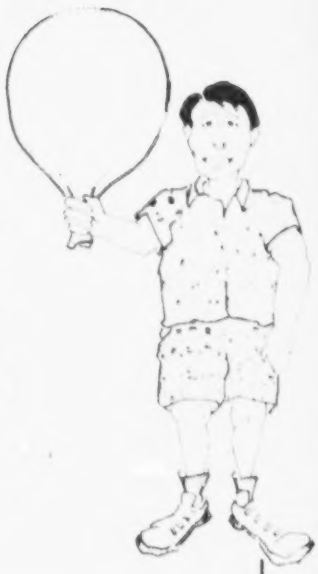
2. Inventions: Have students invent things which operate because of air pressure. Have them draw pictures of their inventions and write about how they work.

3. What if...?: Students brainstorm what would happen if a given situation changed, for example:

   "What if cold air rose and warm air sank?"

   Have them write and illustrate stories based on the brainstormed ideas. Encourage them to use a story grid or a pictoral story strip to help develop their stories.





EVALUATION ACTIVITIES - GRADE THREE

It is important to assess what your students have learned during this unit. The following activities evaluate language and concepts.

You can do them orally (in small groups or with individuals) to test listening and speaking or on paper to test reading and writing. These are only suggestions; you can substitute different content or vocabulary items to make them more appropriate for your students. You probably will want to include many other activities as well.

1. Tell or give the students four or five words or phrases. Have them indicate which do not belong.

   warm air: rises goes up gets bigger sinks expands

2. Tell or give the students sentence beginnings to match to sentence endings.

Warm air	contracts.
Warm air	rises.
Cool air	sinks.
Cool air	expands.

3. Tell or give the students the beginning of a sentence and a number of possible sentence endings. They indicate which sentence endings are appropriate for the sentence beginning.

   Air pressure helps people when
   - they fly in airplanes.
   - they use a vacuum cleaner.
   - they pour ketchup out of a bottle.
   - they drink through a straw.

4. Give the students pictures of things discussed in the lessons (parachutes, balloons, etc.). Have them tell or write statements about the pictures.

Who Has Seen the Wind?

From Sing Song
By Christina Rosetti
The Macmillan Company, 1924

Who has seen the wind?
Neither I nor you:
But when the leaves hang trembling
The wind is passing thro'.

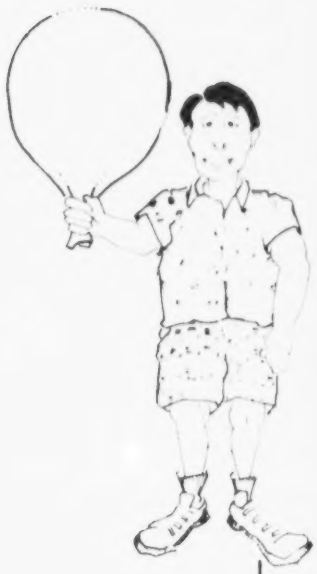
Who has seen the wind?
Neither you nor I:
But when the trees bow down their heads
The wind is passing by.

The Night Wind

By Catherine A. Morin
Source Unknown

There's someone tapping at the window,
There's someone whispering at the door,
There's someone creeping through below there
And lifting up the carpet from the floor.

Shush! There's a crying and a moaning.
Hist! What a racket and a din!
Ho! Such a roaring in the chimney.
'Tis the night wind trying to get in.



Saturday Wind

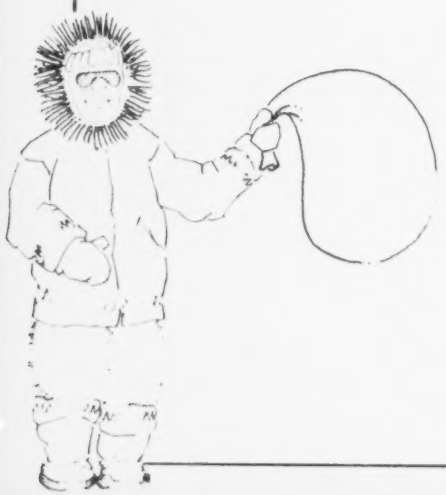
By Margaret Hillert
Source Unknown

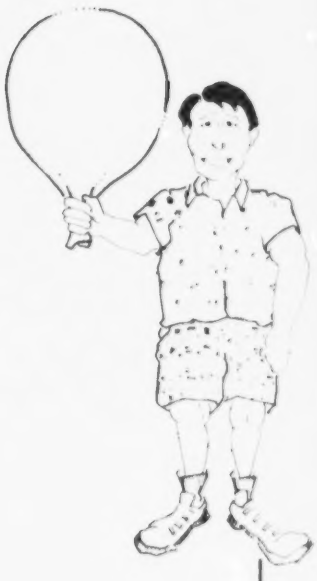
A Saturday wind is a play-with-me wind,
A won't-you-come-out-and-be-gay-with-me wind,
A run-with-me wind,
A fun-with-me wind,
An I'll-chase-you-in-the-sun-with-me wind.
A Saturday wind is a go-with-me wind,
A kind of bluster-and-blow-with-me wind,
A sigh-with-me wind,
A fly-with-me wind,
An almost-go-up-to-the-sky-with-me wind.

Wind

Aileen Fisher
Source Unknown

The wind has lots of noises:
it sniffs,
it puffs,
it whines,
it rumbles like an ocean
through junipers and pines,
it whispers in the windows,
it howls,
it sings,
it hums,
it tells you very plainly
every time it comes.





Wind Song

Lillian Moore
Source Unknown

When the wind blows
the quiet things speak.
Some whisper, some clang,
Some creak.

Grasses swish.
Treetops sigh.
Flags slap
and snap at the sky.
Wires on poles whistle and hum.
Ashcans roll.
Windows drum.

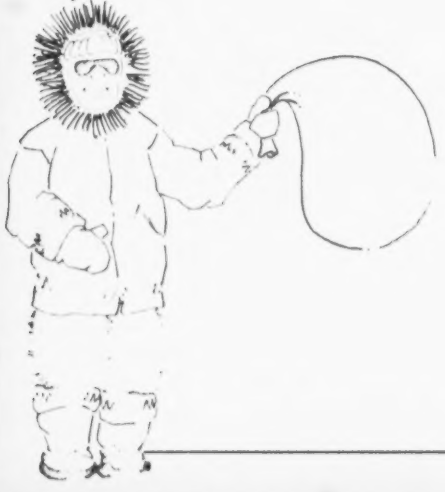
When the wind goes -
suddenly
then,
the quiet things
are quiet again.

Brooms

Author Unknown

On stormy days
When the wind is high
Tall trees are brooms
Sweeping the sky.

They swish their branches
In buckets of rain
And sweep and sweep it
Blue again.



Clouds

Author Unknown

White sheep, white sheep
On a blue hill,
When the wind stops
You all stand still.

When the wind blows
You walk away slow,
White sheep, white sheep
Where do you go?

Wind

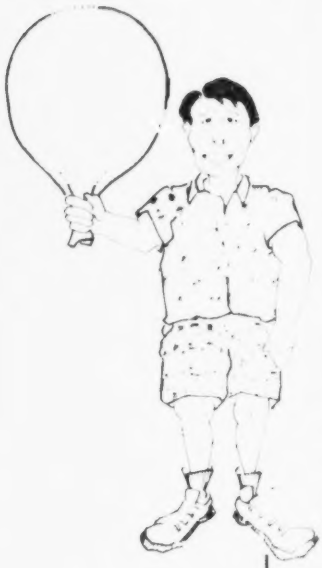
Author Unknown

Five little children from our school
Went for a walk one day,
The wind blew so hard
It turned them about
And they walked the other way.

Old March Wind

Author Unknown

I say, old March wind, blow, blow, blow,
Make the arms of the windmill to,
Flutter the clothes on the clothesline high,
Toss the kites about the sky,
Push the sailboat over the deep,
And waken the birds from their winter sleep.



I Like the March Wind

Leland B. Jacobs
Source Unknown

March winds race,
And March winds prance.
March winds skip,
And March winds dance.

March winds whirl.
They tip-toe too,
And what they're doing
I can do.

Crick! Crack!
From Blackberry Ink
By Eve Merriam
William Morrow and Company, Inc., 1985

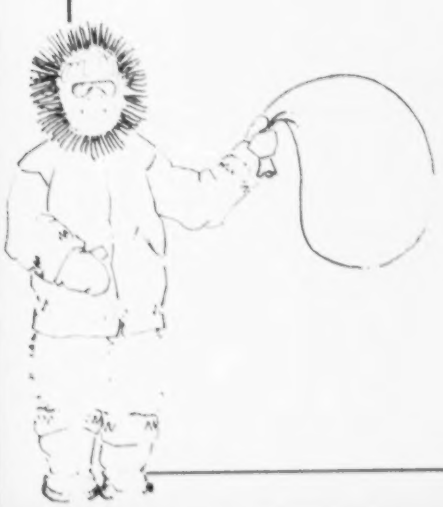
Crick! Crack!
Wind at my back.

Snit! Snat!
Snatched off my hat.

Whew! Whew!
It blew and blew.

Snapped at my ears,
Flapped at my shoes,

And now I've got only
One mitten to lose.



When the Wind Blows

Wendy Stephenson

What does a kite do
When the wind blows?
It goes up and down,
High and low.

What does a parachute do
When the wind blows?
It floats from side to side,
Watch it go.

What does a balloon do
When the wind blows?
It goes anywhere
Nobody knows!

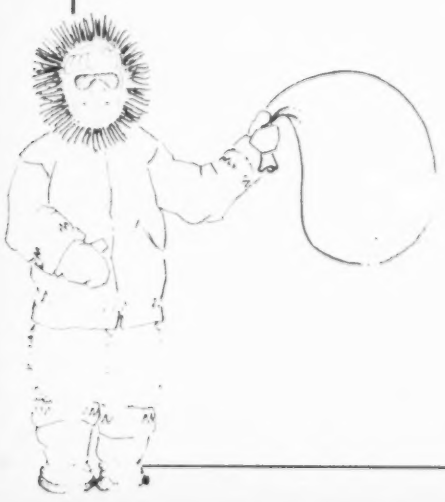
The Wind

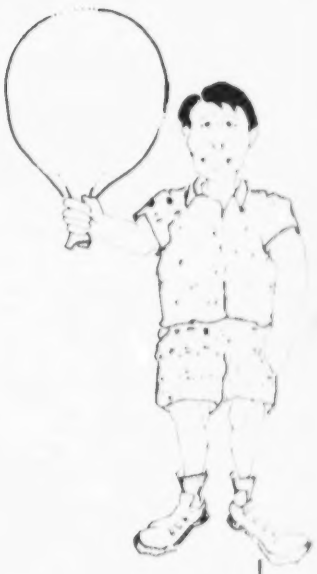
By Dorothy Graddon
From The Book of a Thousand Poems
Evans Brothers

What can be the matter
With Mr. Wind today?
He calls for me so loudly,
Through the key-hole, "Come and play."

I'll put my warm red jacket on
And pull my hat on tight,
He'll never get it off, although
He tries with all his might.

I'll stand so firm upon my legs,
I'm strong, what do I care?
Now, Mr. Wind, just come along
And blow me if you dare.





The Sound of the Wind

By Christina Rosetti
From Once Upon a Rhyme
By Sara & Stephen Corrin
Faber & Faber Limited, 1982

The wind has such a rainy sound
Moaning through the town,
The sea has such a windy sound -
Will the ships go down?

The apples in the orchard
Tumble from their tree -
Oh will the ships go down, go down,
In the windy sea?

WINDY WORLD

Jean Conder Soule
Source Unknown

I am the wind
And you'd better watch out!
I can run, I can fly;
I can whistle and shout.

I can tap on your window
And howl at your door,
Tug on your coat tails,
Bellow and roar.

But in March I'm the loudest;
Look out for my might!
For when you're not looking
I'll steal your new kite.

THE WIND

Robert Louis Stephenson

I saw you toss the kites on high
And blow the birds about the sky;
And all around I heard you pass,
Like ladies' skirts across the grass -
O wind,
a-blowing all day long,
O wind,
that sings so loud a song!

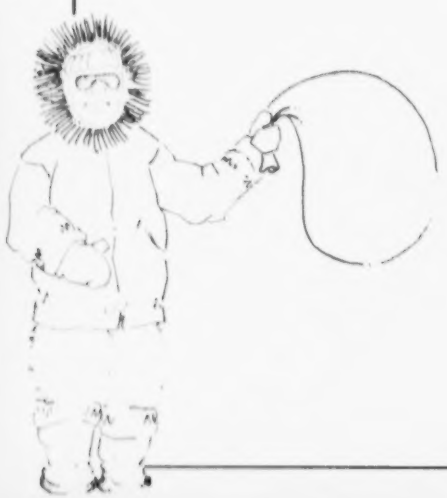
I saw the different things you did
But always you yourself you hid.
I felt you push, I heard you call,
I could not see yourself at all -
O wind,
a-blowing all day long,
O wind, that sings so loud a song!

O you that are so strong and cold,
O blower, are you young or old?
Are you a beast of field and tree,
Or just a stronger child than me?
O wind,
a-blowing all day long,
O wind,
that sings so loud a song!

Wind

Author Unknown

I said, "This way."
The wind said, "That."
"Ho," said the wind.
"I'll have your hat."
And he snatched my hat
With a shout of glee,
And hung it high
At the top of a tree.



March Wind

Author Unknown

I saw you chase that little cloud
And race along and laugh aloud,
I saw you take the grocer's hat
And make him run, although he's fat.
Oh, March Wind, I'm ashamed of you
I saw you at your fun.
I saw you, March Wind, woo-oo
Your mischief has begun.

The March Wind

Author Unknown

The March wind blows and blows and blows,
Za-whoosh, za-shoosh is how it goes.
It tries its best to grab my hat
But I am much too quick for that.

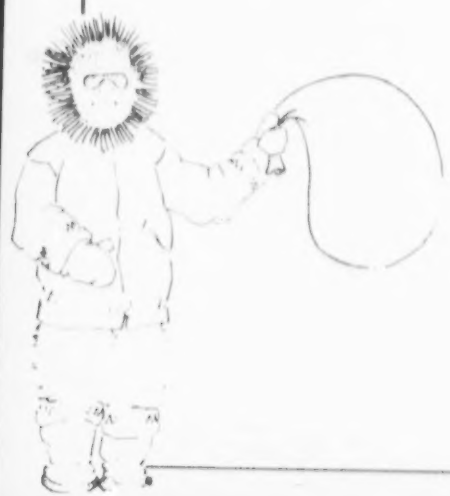
It stings my nose, my face, my ears
And often fills my eyes with tears.
It shrieks and brushes through my hair
It's very hard for me to bear.

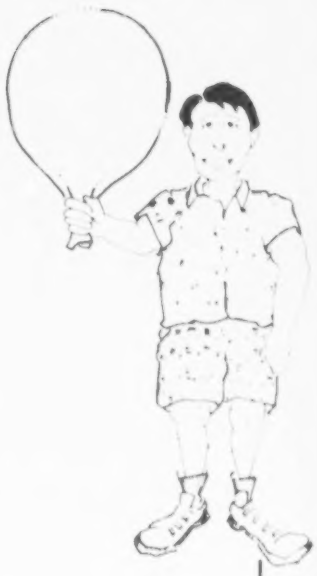
March Wind

Author Unknown

When the March wind growls,
Watch out today
It might freeze your toes
When you're out to play.

When the March wind hums
A soft little song,
Then open your coats,
Spring is coming along!





WIND

Aileen Fisher
Source Unknown

The wind
The wind!
Whooshing, swishing
howling, pushing
That's the wind.
The wind is cold.
The wind is chilly.
Wind!

Screeting, wheezing
Breezing, freezing
That's the wind
Dash
Tumble weeds roll
Trash cans crash
Smash!
Dirt flies
Dust gets in your eye
That's the wind!

GO WIND

Author Unknown

Go wind, blow.
Push wind, swoosh.
Shake things
take things
make things
fly.

Ring things
swing things
fling things
high.

Go wind, blow.
Push things - wheee.
No, wind, no.
Not me -
not me.

MY RED BALLOON

From Over and Over Again
By Barbara Treson & Christopher Rowe
Arrow Books Limited, 1984

This red balloon that I've got in my hand
Will take me away to a far-off land.

CHORUS: I've got a red balloon and can fly across the sea.
You should get one too and then come along with me.

Although it looks tiny, I've only got to blow
To make it grow bigger, and grow and grow ...

Until it will lift me into the sky,
Then over the trees and off I'll fly.

The people below will all stand and stare
When they see me floating by in the air.

So I'll wave to them as I drift along,
I'll wave my hand and I'll sing this song:

Up In A Balloon

Traditional

Up in a balloon, boys,
Up in a balloon,
Sailing 'round the little stars
And all around the moon.
Up in a balloon, boys,
Up in a balloon,
Won't we have a jolly time
Up in a balloon!

BALLOONS

Source Unknown

Blow up and tie up
A big balloon.
Let it fly free,
Let it dance.
Open up the string!
Out comes the air and
Now the balloon
Spins in crazy, arching zooms!

My Balloon

(Sing to tune "Mary Had a Little Lamb")
Wendy Stephenson

Watch me blow up my balloon,
my balloon,
my balloon.
Watch me blow up my balloon
And fill it up with air.

Watch it grow, it's getting big,
getting big,
getting big.
Watch it grow, it's getting big
As I fill it up with air.

Now I'm going to let it go,
let it go,
let it go.
Now I'm going to let it go.
Let all the air go out.

Watch it now, it's getting small,
getting small,
getting small.
Watch it now, it's getting small
And all the air is gone.

The Red Balloon

Source Unknown

I had a little red balloon
But then I blew and blew
Till it became all big and fat
And grew and grew and grew.

I bounced it to the ceiling.
I did not let it drop.
I bounced it on the floor,
And suddenly it went POP!

Three Balloons in the N.W.T.

Wendy Stephenson

Three balloons in the N.W.T.
Wanted to see what they could see.
One in the bush.
One on the barrens.
One on the Mackenzie.
Three balloons in the N.W.T.
Wanted to see what they could see.
One saw black bear.
One saw a caribou.
One saw fish everywhere.
Three balloons in the N.W.T.
Wanted to see what they could see.
The bear took a swipe - POP!
The caribou took a step - POP!
A jackfish took a bite - POP!
No more balloons in the N.W.T.
They all saw what they could see.

Red Balloons, Blue Balloons

W. Stephenson

Red balloons
Blue balloons
Full of my hot air.

Red balloons
Blue balloons
Flying way up there.

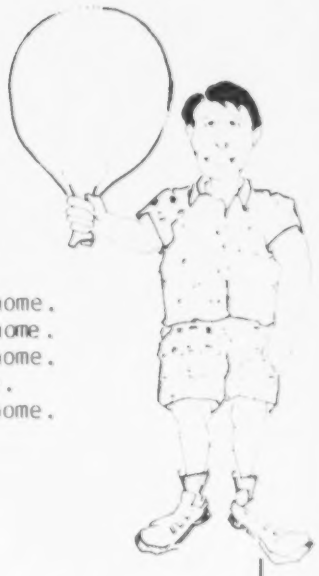
Red balloons
Blue balloons
I hope you never stop.

Red balloons
Blue balloons
Oh no! I heard a POP!

Little Balloon

Author Unknown

I had a little balloon	(Make circle with hands)
That I hugged tight to me.	(Hug self tight)
There was a great big BANG!	(Clap hands loudly)
No more balloon, you see.	
But if I had this many more,	(Hold up five fingers)
I wouldn't hug them tight!	(Shake head)
I'd just hold onto the strings	(Grasp strings)
And fly up like a kite.	(Raise both arms)



No More Ballons!

M. Gilmour

On Sunday I found one red balloon and I took it home.
On Monday I found two blue balloons and I took them home.
On Tuesday I found three yellow balloons and I took them home.
On Wednesday I found four green balloons and I took them home.
On Thursday I found five purple balloons and I took them home.
On Friday I found six orange balloons and I took them home.
On Saturday I found seven white balloons and I took them home.
And my mother said, "No more balloons!"

Baby Seeds

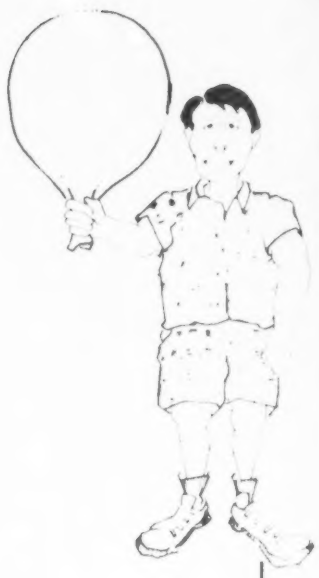
Author Unknown

In a bullrush cradle
    Snug and warm (Cup hands.)
Baby seeds are hiding
    Safe from harm (Make yourself small.)
Open wide the cradle
    Hold it high (Open hands.)
Come Mr. Wind
    Help them to fly (Blow in hands.)

Seeds

Author Unknown

Some seeds go pop down to the ground
Others like feathers float around.
Some seeds have wings like airplanes
They twirl about in roads and lanes.
Some seeds have hooks that hold on tight
They clutch and cling with all their might.
Some seeds that fall are very small
And no one knows they're there at all.



The Tire

Author Unknown

I'll play that I'm a tire
And take a breath just so,
Pretend that I am filled with air
From head down to my toe,
And then when I am very full
I'll let it go like this:
Softly-softly-softly
S-s-s-s-s-s-s-s.

Autumn Leaves

Author Unknown

Leaves are floating softly down, (Wave arms up and down)
They make a carpet on the ground.
Then swish, the wind comes whistling by, (Move arms from one side to other)
And sends them dancing to the sky. (Flutter hands up in air)

THE AIR AND THE LITTLE CLOUD

"I'm so strong" said the Air to the Little Cloud.

"Really?" said the Little Cloud. "What can you do?"

"I can push things.
I can hold things up.
I can slow things down." said the Air.

"Oh! What can you push?" asked the Little Cloud.

"I can push a balloon.
I can push the water.
I can push a sailboat too!" said the Air.

"Oh! What can you hold up?" asked the Little Cloud.

"I can hold up a boy.
I can hold up a tire.
I can hold up a rubber toy." said the Air.

"Oh! What can you slow down?" asked the Little Cloud.

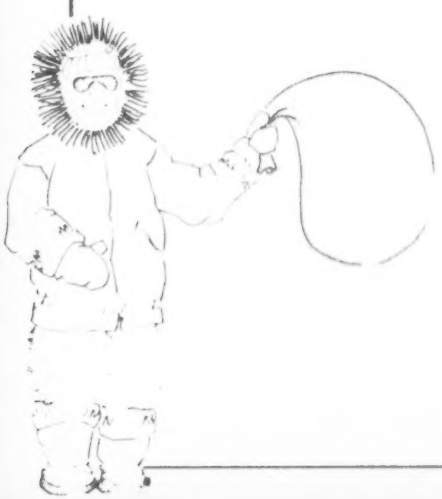
"I can slow a parachute down.
I can slow a paper down.
I can slow a leaf down." said the Air.

"You see! I'm so strong! I can do all those things!" said the Air.
"What can <u>you</u> do, Little Cloud?"

"Nothing." said the Little Cloud softly.

"Don't worry! I'll make you happy." said the Air.

The Air gave a little push and sent the Little Cloud flying happily across the sky.



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